



MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office.

VOL. LIX. No. 17. }
WEEKLY. }

BALTIMORE, MAY 4, 1911

{ \$4.00 A YEAR.
SINGLE COPIES, 15 CENTS.

Manufacturers Record.

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.
BALTIMORE.

RICHARD H. EDMONDS, President.
FRANK GOULD, Vice-President.
VICTOR H. POWER, Treasurer.
I. S. FIELD, Secretary.

RICHARD H. EDMONDS,
Editor and General Manager.

EDWARD INGLE, Managing Editor.

ALBERT PHENIS,
General Staff Correspondent.

Branch Offices:
New York—5 Broadway.
Boston—643 Old South Building.
Chicago—1116 Fisher Building.
St. Louis—543 Century Building.

Subscription, - - - - - \$4 a year
(payable in advance) to United States,
Mexico, Cuba, Porto Rico, Hawaii and the
Philippines.

To Foreign Countries (including Canada) in
the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as sec-
ond-class matter.]

BALTIMORE, MAY 4, 1911.

PROMOTING THE GOOD-ROADS CAUSE IN THE SOUTH.

In manifestation of the keen, practical interest it has long had in every movement likely to conduce to the material advancement of the section which it serves, the Southern Railway started this week from Mobile, Ala., its special good-roads train for a five-months' trip through Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and Southern Illinois and Indiana. The train is equipped with working models run by electricity of improved road-building machinery and enlarged photographs of fine highways in different parts of the world, and at the many stops it will make lectures, illustrated by stereopticon views, will be given by experts in road building. Co-operating with the Southern Railway in this practical educational campaign are officials of the public-roads office of the National Department of Agriculture and of the American Association for Highway Improvement.

As emphasized in a special article elsewhere in this issue of the MANUFACTURERS RECORD, written by Mr. M. V. Richards of the land and industrial department of the Southern Railway, and illustrated with views of road-building machinery in operation, this comprehensive undertaking recognizes the fact that good roads are the best feeders of the railroads and are important factors in the development of the South. Good roads mean good churches and good schools, together with good facilities for neighborhood intercourse, and consequently they are among the best sorts of immigration agencies. The home-

seeker, everything else being equal, is pretty sure to be influenced for or against a locality by the character of its roads. The farmers are coming to understand better and better that good roads increase the value of their lands, in reducing the cost of getting their products to market and in aiding them in diversifying their agriculture. Good roads assure a reasonable amount of regularity in freight service, and thus give the railroads a basis for provision for handling it promptly. Good roads are savers of time, trouble and money, and in promoting through its good-roads train the cause of improved highways in the South, the Southern Railway is benefiting itself and the whole section.

THREATENED TARIFF LEGISLA- TION INIMICAL TO THE SOUTH.

The introduction of a tariff bill into Congress putting on the free list many of the products of the South once more illustrates that the South's worst enemies are often to be found among its own public men. In times past the material development of this section has been seriously halted by the unwise of the agitation of men of the South rather than by injury done by outsiders. The worst enemies to the real progress of the South have not always been either the men or the papers of other sections who have antagonized this section and criticised it bitterly, but they have been the people of its own household, men who from mistaken political views or from the advocacy of political views, whether at heart they believed in them or not, adverse to the South's best interests. The free-silver campaign of 1896, which aroused such bitterness throughout the South by reason of the intense activity of so many public men in this section, proved a great injury. It tremendously handicapped the real business men of the South in their efforts to develop this section. Then came the equally bitter hostility to railroads, against which the leading manufacturers and business men of the South pleaded in vain. Now comes again the agitation for a revision of the tariff along lines certain to be injurious to this section and disastrous to many interests. Congressman Underwood, in his recent attempted defense of his position, took the ground that pig-iron can be made in Birmingham at \$7.50 a ton. Will Mr. Underwood be willing to go to the Government's official figures compiled a year or two ago and publish as broadly as was his speech the exact cost of iron-making in Alabama? If so, a new light will appear. There was a time in the disastrous panicky period following 1893 when pig-iron might have been made in the Birmingham district at \$7.50 a ton, but that was due to the starvation prices paid to labor, the rate of wages then being not more than one-half the rate now paid for unskilled labor around the furnaces, and to the fact that in order to make iron at such prices furnace companies had to skim

the cream of their property in the way of ore and of coal, and only one or two companies could do it then. With increasing wages throughout the South, and especially in the iron regions, there would have been a very great increase in the cost above \$7.50 a ton if it had been possible to continue to skim the cream from iron-ore properties, but with greater depth of mining, both of coal and of ore, costs were added, until today the average cost of iron-making in the Birmingham district is certainly \$3 a ton higher than Mr. Underwood's figures.

Does Mr. Underwood want to go back to the starvation wages of 1893 to 1896? That would be the first move necessary to enable the iron regions of Alabama to live under his proposed scheme to make \$7.50 pig-iron. But it is impossible to restore the cream to the iron-ore properties, and increasing depth of mining operations must continue to add to the cost of producing ore and coal. These facts are well known to every intelligent man in Alabama.

Mr. Underwood in his attempted defense of his position referred to the fact that Birmingham had exported iron to foreign countries. It is true that in the great depression following 1893, with the starvation wages then existing everywhere, some iron companies in Birmingham shipped iron abroad, not with a view to making money on it, but hoping to unload it on foreign markets without a loss. It is impossible for Birmingham in the present situation to export pig-iron to profit. Certainly Mr. Underwood is aware of that fact.

In the same speech he stated that cotton ties are not made in Alabama, and, therefore, that the South is not interested in giving protection to such interests. In reply to this Mr. J. W. McQueen, vice-president of the Sloss-Sheffield Iron & Steel Co., has written to the *Age-Herald* of Birmingham as follows:

Mr. Underwood says that no cotton ties are manufactured in the Birmingham district. He seems, therefore, to imply that Birmingham is not interested in the subject and should keep quiet. As a matter of fact, however, Birmingham citizens are interested in the welfare of the entire South, and the Birmingham "district" to a Southern patriot may become sufficiently elastic to take in on such a matter Atlanta and Gadsden.

Cotton ties, it is well known, have been manufactured for years by the Atlanta Steel Co. in Atlanta, Ga. At the present moment 5000 tons of steel billets are being rolled at Gadsden for conversion into cotton ties at the Helena Rolling Mill, only 16 miles from Birmingham, on the main line of the Louisville & Nashville Railroad. This mill has been idle for some time, and is now scheduled to start up May 1, never having contemplated in making its arrangements that such a blow would be directed against this district.

A mill for the manufacture of cotton ties is about 60 per cent. completed at Gadsden at the plant of the Southern Iron & Steel Co.

Is the district to understand that because it has thus far restricted its energies to the production of raw materials and has not yet produced chains, anchors, anvils, saws, hammers, axes, locomotives, marine engines, harvester and agricultural implements generally that therefore it is to have no sym-

pathy with proposals to put all these on the free list?

The reductions which have been made successively in the rates of duty on pig-iron have already taken away from the Birmingham furnaces their trade north of Norfolk, Va. Thousands of tons of English and of Nova Scotian pig-iron are imported into Philadelphia.

However much it may be regretted that the South must again appeal for protection from ruthless destruction of many of its industrial interests to those of other sections who have for years stood solidly for protection to all American industries, it seems that it is necessary to do so again. Unless the public men of the South will stand for a fair protection to its own industrial interests, the material progress of this section will surely again be halted or seriously injured unless men of other sections fight successfully against the effort of Mr. Underwood and his associates. Every business interest in the South, the lumber people, the iron and coal interests, the mica interests, merchants and farmers and laborers alike, are vitally concerned in a fair measure of protection to every line of industry in the South. So long as a tariff exists, and it must exist so long as we collect taxes on foreign imports, the South should demand equal protection to all of its interests with the protection afforded to the manufacturing interests of other sections.

THE END OF WATER POLLUTION BY SEWAGE IN SIGHT.

The vexing sewerage problem which every city must contend with at one time or another has been met in the case of Baltimore in a way that will prove an example for all other cities, and the system adopted and being carried to completion here must prove a forerunner of many others of a similar kind. The problem has not been in the conveying of sewage to an available outlet, but in so treating and disposing of it as to prevent it from polluting the waters into which the sewer water is conducted. Cities which have been put to great expense in carrying their sewage to nearby streams or other bodies of water have now to contend with an aroused public opinion and private objections of the affected population on account of the pollution of such waters. The fact that the Baltimore system, now being carried forward under the able supervision and thoroughly tested and proved plans of Chief Engineer Calvin W. Hendrick of the Baltimore Sewerage Commission, will dispose of this sewage without in any way injuring the waters of the vicinity into which the system will empty, is attracting wide attention throughout this and foreign countries.

The crux of this system lies in the purification of the water after the sludge has been settled away from the sewage. It is not treated by chemicals, but itself contains the elements of the destruction of its bacteria. This is brought about by spraying the water over filter beds of broken stone ranging

from one inch to two and one-half inches in size and the bed having a depth of eight and one-half feet of this stone. A gelatinous film forms on these stones in which bacteria grow, and as the water trickles down it is purified of its bacteria by the contact with this gelatinous bacteria bed, and is then in condition to be discharged into the river or for any other use that the circumstances may require. The sludge is dried over sand beds and is rendered entirely innocuous, and no objectionable odor is produced in the process. The greater part of the cost of this system to the city is in reaching the disposal plant, five and three-quarter miles distant, through 160 miles of mains and laterals, and as it would be necessary in any case to conduct the sewage away from the city, this disposal method is undoubtedly an economical as well as an effective solution of the sewage problem.

The disposal plant is constructed on the unit system, so that additions may be economically made as the sewers are extended. The complete system as contemplated for Baltimore has been planned for a population of 1,000,000 persons. The method of treatment is as follows: The sewage delivered at the disposal plant through the outfall sewer will first be screened. It will then pass through the meter-house to hydrolic tanks about 450 feet long, having eight hours' average flow, so that the heavier substance will settle in the water and remain at the bottom of the tanks. It will then pass through a collecting channel to the control-house and on to the sprinkling or spray filters. The water has sufficient head to give the required spraying force as it passes out over the filter bed of broken stones. After it passes through this filter bed and the bacteria are eliminated or destroyed by the gelatinous film of other bacteria on the stones it will pass through settling basins holding three hours' average flow, and on to the power-house, where a fall of eighteen feet will be utilized to furnish power and electric light for operating the plant. After passing through the power-house the purified affluent will be discharged into Back River. The hydrolic tanks will be cleared of the settled substance by its being drawn into the sludge digesting tanks, where it will be allowed to remain until reduced to an innocuous condition. It will then be dried out on sand filters and used for filling low ground in the vicinity, or other possible uses for which it may prove available.

The fact that sewage can be thus disposed of and rendered innocuous and the water purified before passing into the streams should result in every city, town, factory or community of any kind that is now sending polluted water into the streams of this country taking steps toward inaugurating proper means of disposal. This system can be built in small units as effectively as large, and the cost will depend only on the local structural requirements, and the construction features are not complicated.

The great problem of sewage disposal in the vicinity of New York Bay that has now reached the United States Supreme Court, owing to suits of affected communities, may yet be solved by eliminating the objectionable features altogether. In those communities in which these problems are yet to be attacked, this Baltimore system has, as Mr. Hendrick says, "blazed the way" toward satisfactory and economical treatment. The day should not be far

distant when communities, for their own sanitary and civic betterment, will insist on having effective disposal plants, and will also insist on isolated factories, mills, etc., purifying the polluted water resulting from manufacturing uses, etc., to the end that the pure water of our streams and bays may remain pure and uncontaminated, for, as has been truly said, "one of the nation's greatest assets is pure water."

INCREASING SOUTHERN BUSINESS ACTIVITIES.

During April the MANUFACTURERS RECORD's Construction Department published nearly 5000 items relating to new projects and advancing developments of established or progressing industrial, engineering, railroad, building, mining and other general business interests of the South and Southwest. These have appeared in the *Daily Bulletin* and in the weekly columns of the MANUFACTURERS RECORD, and are briefly summarized in the following statistical table:

<i>Synopsis of Construction Department, MANUFACTURERS RECORD, for the months of January, February, March and April, 1911.</i>	
Total items to May 1.....	18,137
Construction.....	15,912
Machinery, Proposals and Supplies Wanted.....	2,422
Burned, etc.....	703
January, February and March items previously detailed.	
April items divided in detail as follows:	
Bridges, Culverts, Viaducts.....	74
Canning and Packing Plants.....	18
Clay Planting Plants.....	14
Coal Mines and Coke Ovens.....	43
Concrete and Cement Plants.....	8
Cotton Compresses and Gins.....	38
Cottonseed-oil Mills.....	18
Drainage and Irrigation.....	22
Electric-light and Power.....	87
Fertilizer Factories.....	12
Flour, Feed and Meal Mills.....	11
Foundry and Machine Plants.....	15
Gas and Oil Developments.....	52
Ice and Cold-storage Plants.....	27
Iron and Steel Plants.....	7
Land Developments.....	102
Lumber Manufacturing.....	86
Metal-working Plants.....	3
Mining.....	28
Miscellaneous Construction.....	42
Miscellaneous Enterprises.....	157
Miscellaneous Factories.....	232
Railway Shops, Terminals, Round-houses, Sheds, etc.....	13
Road and Street Work.....	251
Sewer Construction.....	76
Telephone Systems.....	33
Textile Mills.....	48
Water-works.....	126
Woodworking Plants.....	40
Railways.	
Steam.....	202
Street.....	30
Buildings.	
Apartment-houses.....	90
Association and Fraternal.....	146
Bank and Office.....	146
Churches.....	151
City and County.....	69
Courthouses.....	43
Dwellings.....	470
Government and State.....	50
Hotels.....	91
Miscellaneous.....	119
Railway Stations.....	39
Schools.....	282
Stores.....	236
Theaters.....	39
Warehouses.....	59
Burned, etc.....	191
Machinery, Proposals and Supplies Wanted.....	701
Total.....	4841

The Machinery, Proposals and Supplies Wanted list for April contains 29 foreign wants from interested parties in Argentina, Chile, Panama, England, Germany, Spain, Italy, Russia, Turkey and India.

WHY EVE WEEPS.

"Try that, madam," said the serpent politely, as he offered Eve an apple. "You can raise 400 barrels of them to the acre on one of our irrigated orchard farms in the Bezing Valley. Your husband can purchase a 40-acre tract on easy payments." Shortly afterwards the family moved from Eden to seek the new home.—*Chicago Post*.

Yes, they were tempted by the Evil One to leave the South, the original Garden of Eden, and they have been paying the penalty ever since. They are now learning that they can raise better apples and make more money by coming back to the Garden of Eden than by continuing to live where they were led by the serpent. Unwittingly the *Chicago Post* has given away the whole westward movement from the South by

saying that it was due to the work of the Evil One.

HOW TO ADD TO THE POPULATION AND PROSPERITY OF THE SOUTH.

It was but a few years ago when much of the Gulf Coast of Texas was considered as almost worthless except for grazing purposes. A very large amount of land could have been bought in the Brownsville region five or six years ago for 50 cents an acre, and not many people wanted it even at that. But a railroad was built through that section, opening it up to settlement, and investigation demonstrated that much of the land was available for diversified farming, and especially for trucking and fruit growing. Without the railroad, and without vigorous and active work on the part of the railroad and the people owning the land, it would have remained as it had been for all time without population, and worth, as it had been, possibly 50 cents an acre. But men of broad vision who saw what could be achieved undertook to present the attractions of that region to the people of other sections. Unceasingly they told the story of the advantages of the country and what could be done in the growing of fruits and vegetables, and of climatic attractions. What has been the result?

William E. Curtis, writing in the *Chicago Record-Herald* from personal investigation of the situation, makes the statement that within four years along the line of that one railroad more than 50,000 homes and farms have been located, representing 40,000 new families and approximately 150,000 new people. Most of these people, according to Mr. Curtis, have come from the Northwest, showing that people from that section will come South in great numbers when the situation is properly presented to them. In his review of the work done he says the policy was pursued of describing the lands and the advantages exactly as they existed, the effort being made to prevent any misrepresentation through advertisements or circulars. The immigrants, so he says, found exactly what they had been promised, no more and no less. Attractive literature was widely distributed throughout the North and West following advertisements about the Texas section. Every inquiry developed was given as much consideration as if it represented an investment of a million dollars. The result has been that in four years that region has become one of the most prosperous in the whole country, and land which was purchasable at 50 cents an acre is worth \$100 an acre, and in many cases much more. Millions of dollars of value have been created to the enrichment of the landowners, the increase of business of the railroad and the benefit of the 150,000 or more settlers from other regions who have made their home in that section.

What has been done on the Gulf Coast of Texas can be done throughout the South wherever the people and the railroads unitedly determine to do it. There are millions of acres of cut-over pine lands that can be developed by proper methods; there are thousands of farms that could be disposed of to settlers from other sections to the benefit of the South and of the newcomers by proper methods. The South needs a great incoming of new people. It not only needs to see its vast stretches of unoccupied lands or badly tilled lands utilized to the best advantage, but it needs the incoming of new people in order to increase the opportunities to

the people now in the South. Through increased population there will come increased opportunities, greater wealth, better roads and decreasing proportion of negroes to the total population. The time is opportune for active work to duplicate in many parts of the South what has been done in four years on one line of Texas railroad.

PLANTING TREES ALONG PUBLIC ROADS.

A dispatch from Waycross Ga., says: Whatever highways are constructed in Ware county in future will be provided with a double row of shade trees, the cost of setting them out to be borne by property owners and such civic organizations as are pledged to the beautification of city and country roads and streets. Those backing the movement feel that while all of the present generation will not derive benefit from the trees planted, the future generations will be greatly pleased at the work and the county vastly improved. Pecan trees will be used extensively in this work.

The people of Ware county who are planning such work as this are setting an example which should be followed by every county in the South. In the building of good roads, which is the order of the day throughout the South, much can be done to add to the beauty and charm of the country and to enhance the pleasure of living. Ware county is making a move in the right direction.

Thirty years ago when a winter tourist in Florida founded the town of De Land, giving to it his own name, he wisely planned for the encouragement of tree planting. He succeeded in inducing the County Commissioners to give a rebate of 50 cents from taxes for every shade tree that was planted along the public streets or the county roads and kept alive for two years. He believed that by the second year the tree would be safe, and therefore did not secure any rebate of taxation until the tree had lived 12 months. The amount of tax exemption was only 50 cents for each tree. While that was only equal to the cost of setting out the tree and caring for it, it stimulated an interest in tree planting. The result is seen today in the marvelously well-shaded trees and roads in the surrounding country and in De Land. Many New England towns boast, and justly so, of their magnificent shade trees, and for over a century New England has been devoting much attention to the beautifying of its streets and roads with shade trees. But, judging from a fairly wide acquaintance with New England towns, De Land has every one of them, in the language of the late President, "beat to a frazzle" in the matter of shade trees, and likewise in the matter of well-painted houses and a general air of thrift. The population of De Land is about equally divided, about one-half being from the South and the other half from the North. Many of them came from country places where comparatively little attention was paid to the beautifying of the streets and to the careful painting of every house, but in De Land all seem to be imbued with the idea of trying to make that town the most beautiful to be found anywhere. De Land illustrates what could be done throughout the South in the beautifying of towns and cities, and Ware county shows what ought to be done wherever good roads are being constructed.

COTTON-MILL MERGERS.

Elsewhere in this issue is correspondence dealing with Southern cotton-mill mergers and an interview with Mr. Lewis W. Parker on the subject.

Good Roads as an Economic Factor; The Best Feeder of the Railroad.

By M. V. RICHARDS, Land and Industrial Department, Southern Railway.

Any suggestion to an individual that involves an effort or a money contribution on his part instantly suggests the mental inquiry: "Will it benefit me, and if so, how?" Too often, when some substantial

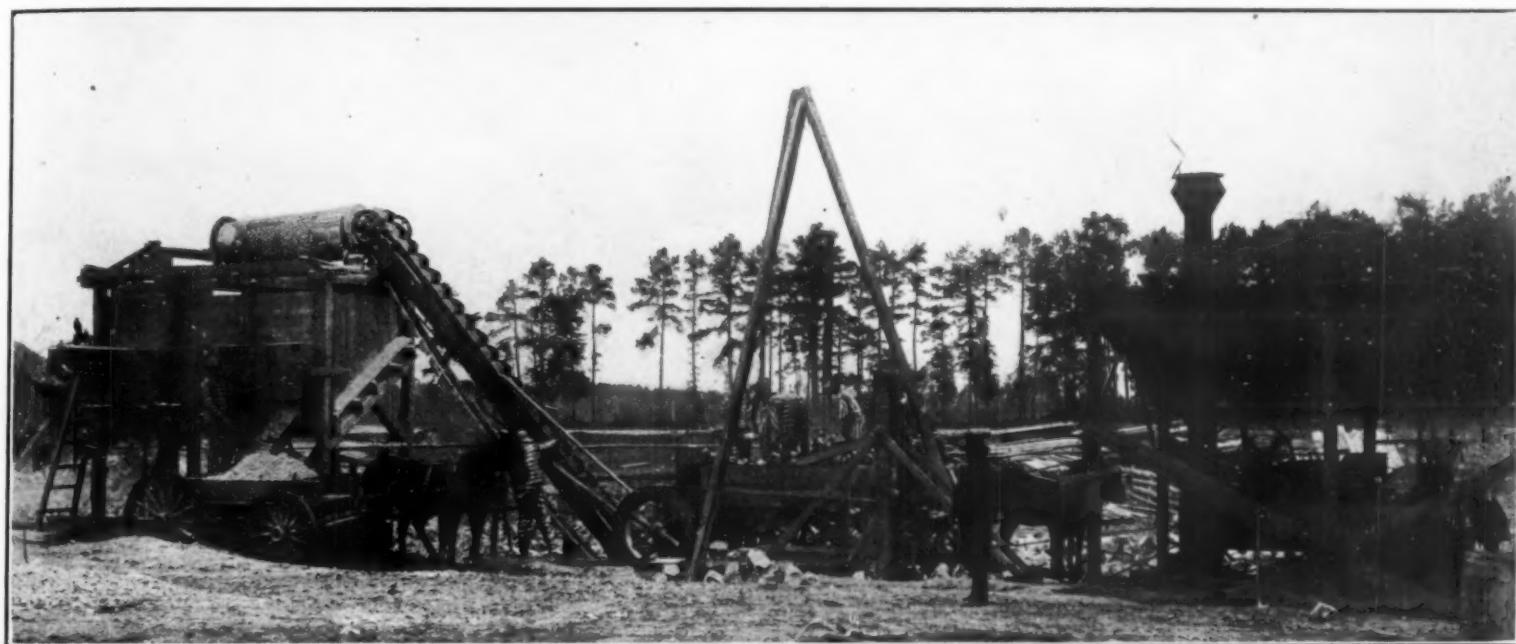
district to offer a bill providing for the betterment of the country highways and the assessments necessary for their construction or renewal.

There is now a new doctrine, and its

ing school at all because the roads are impassable; the liveryman, whose rolling stock and team are used up in the daily round of travel over road ravines and dangerous fords; the tradesman in every rural section, whose supplies and trade come chiefly from the distant farms; every business man, every manufacturer, who handles the products of the forest, the farm or the mine; every railroad traversing agricultural, timber and mining sections; and finally the farmer, whose interest is

acing. A change has become imperative. The bad roads must go. Good roads must replace poor ones. There must be a crusade against the inert highway. Whatever blocks progress in any section inflicts loss upon the railroad that serves it. Therefore, the railroad has abundant reasons for advocating good roads and lending its aid in their behalf.

The Southern Railway has been at all times the advocate of roads of modern construction, capable of resisting water



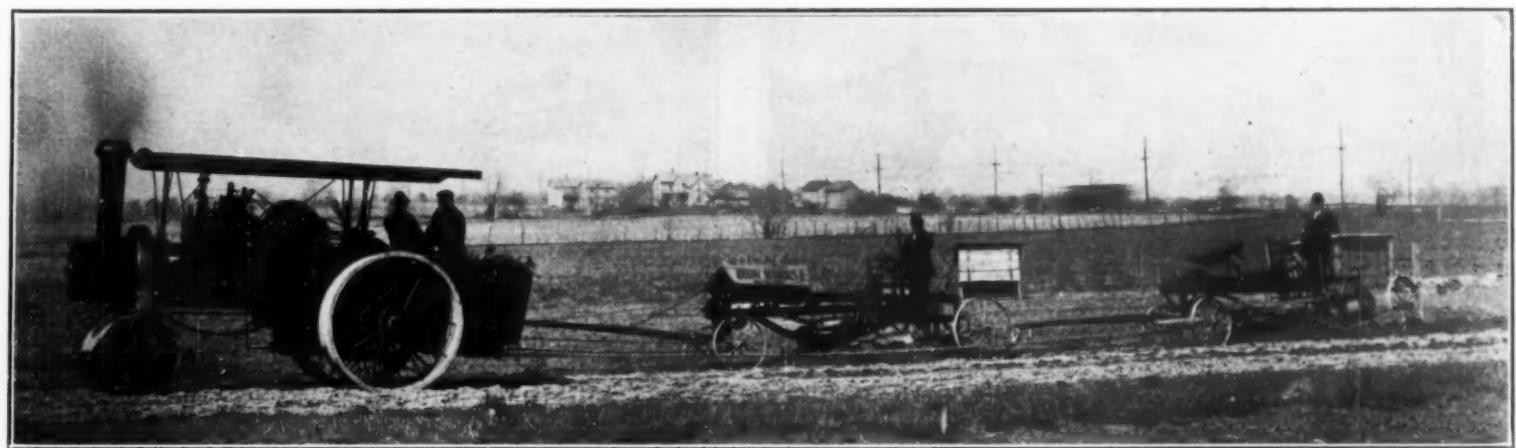
GOOD ROADS MACHINERY CO.'S COMPLETE CHAMPION CRUSHING OUTFIT IN MECKLENBURG COUNTY, N. C.

public improvement in a locality is proposed, public policy and the general good are made subordinate to private interests. But there is something of far greater importance to any community than either the individual or his personal interest. The good of the whole is sought in all well-ordered governments, and the good of the community should influence every one of its citizens, whether he is a direct beneficiary or not, whenever the exigencies demand better conditions. Selfish personal interests must then be secondary, and if

apostles are spreading it abroad, making converts to its tenets and supporters of its creed. "The old dirt road must go" is the dictum, and apostle and proselyte are repeating it in every State in the Union. The adherents are multiplying in every intelligent and progressive portion of the land, and the movement for good roads has become a national movement. The people are for it, and the people are invincible. Every citizen, whether he knows it or not, is personally interested in it. The sinking patient whose bedside the physician

supreme. When the road from his farm to the town is impassable he is an involuntary prisoner—weatherbound at home. Often he suffers serious loss from the decay of perishable products through enforced delay in carrying them to a shipping point; his vehicles and animals are injured; the loss of time in getting over a bad road with only half a load is again and again repeated. In the aggregate, the farmers who are compelled to move their crops over poor roads annually pay a pecuniary penalty many times greater than

encroachment and of sustaining heavy traffic without impairment. Not only has it been an earnest advocate; it has given and is still giving its active and entirely practical aid and co-operation in educating the people within its territory through its literature, through its personal appeal, and by means of good-roads trains equipped with road-making machinery and carrying lecturers expert in the knowledge of how to build and how to maintain the best roads, visiting points on its various lines in the Southeastern States and there



BAKER STEAM ROLLER PULLING GALION IRON WORKS IDEAL REVERSIBLE ROAD GRADERS.

they are not, then existing evils will not be remedied and the community will be wronged.

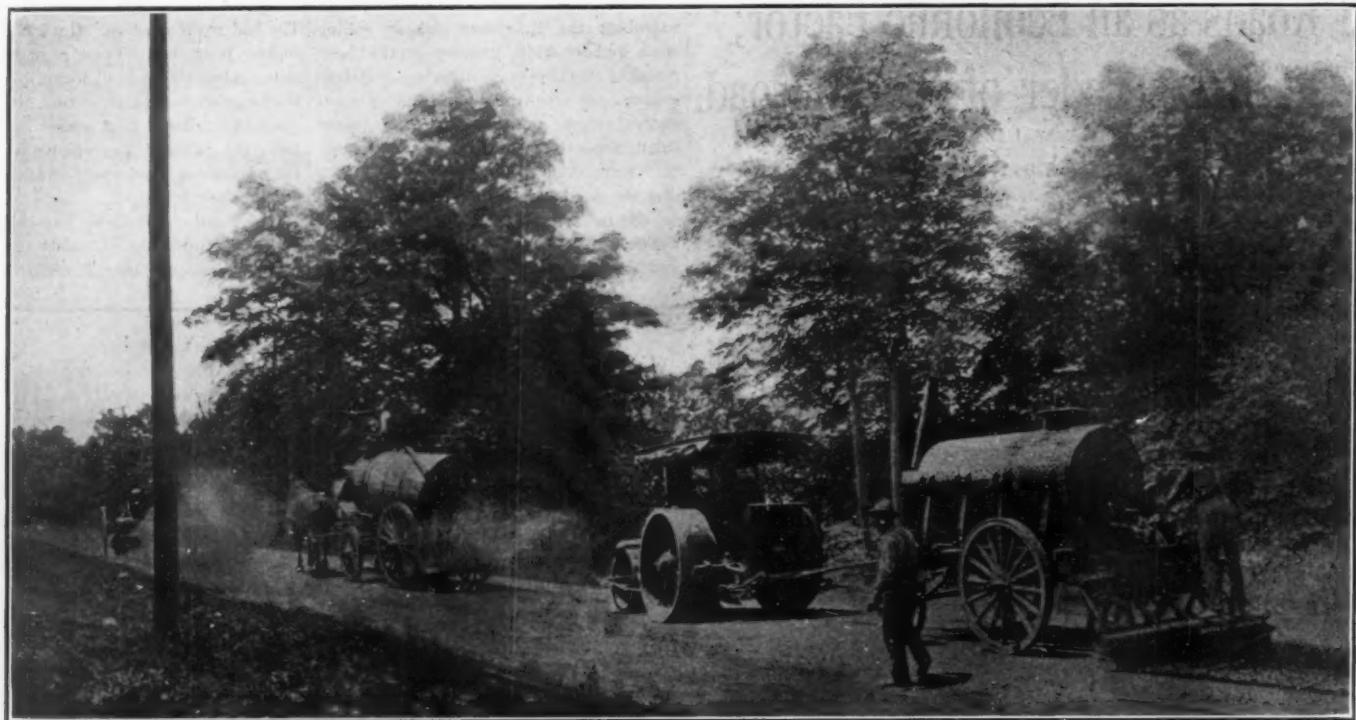
The opposition against practical and permanent roads in the United States has entailed the losses of hundreds of millions of dollars upon its inhabitants, and these gigantic losses have been made deliberately, and not through miscalculation or act of Providence. But for neglect, indifference and selfishness they would have been saved and millions annually added in gains. Within a decade it was an act of martyrdom for a legislator from a rural

cannot reach in time because the road is impassable; the physician himself, who serves the countryside and endures both hardship and peril over the broken highway; the lawyer and judge, due at the country courthouse at a fixed hour, and unable to reach it because "the creek is up and the bridge down;" the circuit rider, whose little congregation waits for him in vain while he is mired five miles away from the country church; the teacher, generally a woman, undergoing a physical ordeal in reaching the pupils, and they, in numbers, prevented from attend-

any annual assessment which the making of good roads would entail upon them.

The railroad and the country road are natural allies. They are as necessary, the one to the other, as the members of the human body. They are alike the arteries of trade. Obliterate either and traffic stops, famine stalks. Cripple either, and trade limps, cost of living increases. The farmer must sell his surplus products; the railroad must have freight to haul. And now the railroad is studying existing conditions, and finding them in many parts of its territory at once deplorable and men-

demonstrating to farmers and others the difference between poor roads and good roads, and the advantages accruing from good and permanent highways through the rural sections. A Southern Railway good-roads train is even now equipped and moving for a tour of months through Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and Southern Illinois and Southern Indiana. The Southern Railway, in co-operation with the Department of Agriculture of the United States, through its office of public roads, has in-



SWEEPING, SPRINKLING AND APPLYING HOT STANDARD OIL BINDER FOR MODERN ROAD SURFACING.

stalled in this train every essential in models (run by electricity) of the latest improved road-building machinery; lecture-rooms, in which free lectures, illustrated by fine stereopticon views, are given by experts in road-building; enlarged and comprehensive views of fine highways in different parts of the world, with a staff of officials from the Department of Agriculture and the Southern Railway in attendance and having supervision of the train. This train's itinerary has been widely published, and is a lengthy one. A representative of the American Association for Highway Improvement accompanies the train, and nothing has been left undone to make this educational tour memorable as an undertaking and because

ing its stations entails a loss to it of a unit of freight wage.

In every producing section served by its lines and having poor roads which are intermittently impassable, deliveries at its stations must at such times be few and scant, to be followed when the roads are again open by perhaps a deluge of freight for immediate or prompt shipment, and this makes best service difficult and adds expense to the movement of extra cars.

The losses sustained by the farmer through delays and damage on a broken road, and from his inability to get perishable crops to the station, is a matter which concerns the railway. We feel it in several ways; for the farmer's gains are added wealth to the railway territory, and

bors' homes and to the town where you visit and shop and attend church?" Every woman, every girl on the farm, should be an enthusiast in favor of the good road, and we believe that this Southern Railway train, which is to give them as well as their husbands and fathers and brothers an opportunity to learn the inestimable benefits that will come to them if bad roads are abandoned and good roads constructed in their neighborhood, will be a revelation to them also.

The Southern Railway is concerned in settling up the country it serves, and from which it derives so much of its revenues. It is constantly issuing literature in America and Europe descriptive of the Southeast, sending its representatives over the

other neighborhoods, and there is consequent regret or discontent.

We are deeply interested in the establishment of good schools in every portion of the Southeast. There are many such, but there must be many more as the population increases. But wherever poor roads prevail there is the poorest provision for education, and the poorest attendance at the schoolhouse. Inclement weather and roads which cannot be traveled by children at such seasons interfere seriously with the progress of the scholars. On the other hand, where good roads prevail there is a magical change in the countryside. Substantial school buildings brighten the highway, and they are filled uninterruptedly by contented pupils. We want every



APPLYING INDIAN REFINING CO.'S LIQUID ASPHALT NEAR NEW ORLEANS.

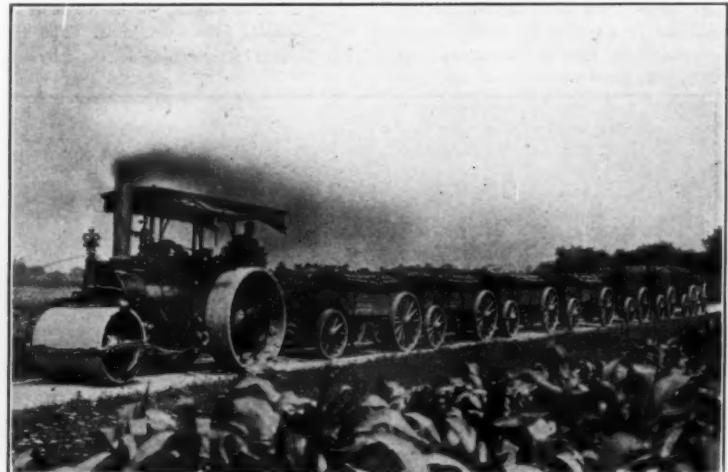
of the good it is believed will be accomplished.

The Southern Railway can very reasonably claim, it would seem, an affiliation with the great movement which is afoot, and it will not pause until its vast territory is ramified by splendid highways radiating from its cities and shipping points and penetrating every rural district embraced in it. It needs but little reflection to understand its interest, its motives, its action in this movement.

Every hundredweight of farm and other products shipped on its cars brings it a unit of freight revenue. Every hundredweight intended for shipment but prevented by bad road conditions from reaching

his losses compel curtailment in expenditure. The farmer who loses cannot be progressive, and if he loses much or often he becomes discouraged. His spirit is infectious and influences strangers who have come to view the local conditions, and they continue on their way.

The Southern Railway is concerned in the home life on the farm. The wives and daughters, who are unable to visit their relatives and friends a few miles away because they cannot travel the roads, have a right to be heard in this momentous question of good roads, and we believe they would have but one voice in answering the query: "Do you want to see good roads built from your home to your neighbor-



HAULING PAVING BRICK WITH BUFFALO STEAM ROLLER CO.'S ROLLER.

North and Central West and East, and moving its many forces in the constant endeavor to secure new and worthy settlers in its territory who will bring added intelligence, wealth and energy and help in the upbuilding of those sections where the populations are sparse and opportunities are many. The prospector who comes down into a district desolated by poor roads or more travesties of roads is not generally impressed in the least by the country, however productive and otherwise attractive, if he has come from a region of fine modern highways. Or, if he does settle, his family will miss the open means of communication with the towns and with

school district in Southern Railway territory to rank high in intelligence, to advance in every practical branch of learning. And those districts that build good roads are moving exactly in line with this policy.

It is the wish as well as the policy of the Southern Railway to see in every part of the Southeast the best-appointed farmhouses. The dweller on a forlorn and ugly road has but little incentive to build handsome dwellings and equip them with comforts, but rather inclines to live in harmony with his poor surroundings, and there is nothing added to the landscape by either road or farmhouse that is pleasing or which suggests either comfort, thrift

or happiness. In the sections where good roads exist one sees equally good houses. He sees taste displayed, the scene is delightful, the family is happy and content, and the prospective settler, the stranger who enters that section with the purpose of buying a farm, becomes a neighbor and a coworker in the community or settlement.

The enhancement in the values of farm lands in the Southeast is a matter of interest to the Southern Railway. Stagnant conditions are repelling, and are against

Notable Experiment with Road Materials.

Perhaps the largest and most important experiment with modern road materials in the country is being conducted on the outskirts of Baltimore on a stretch of roadway known as Park Heights avenue.

Greater scientific attention has been paid in recent years to the construction of good roads than ever before. This has been brought about both on account of the development of the automobile and the increasing amount of good-roads construc-

tion. Personal attention to this experiment, and careful records are being kept regarding the exact cost of each section, the annual expenditure for maintenance and the amount and varied character of the traffic on them. This work, on account of its extent and thoroughness, has attracted the attention of road engineers and builders, and State and county officials throughout the country, as these interests fully recog-

yards south of Clark's lane, one car of "Texas Oil;" 100 yards south of Clark's lane to Jones' station, one car of "Fluxed Asphalt" from Headley Good Roads Co.; Jones' station to Seven Mile lane, "Trinidad Asphalt," from Barber Asphalt Paving Co., Philadelphia; 250 yards north of Seven-Mile lane to 50 yards south of Slade avenue, "Fairfield Binder," from Impervious Product Co.; 50 yards north of Slade avenue to 200 yards south of Old Court Road light, "Fairfield Anti-Dust;"



SPRAYING BARRETT MANUFACTURING CO.'S TARVIA "X" WITH STEAM.

its interests. In its perpetual effort toward development in its territory those efforts would be seriously affected and its purpose thwarted if the farm lands do not increase in value year after year. There is then no argument sufficient to induce strangers to invest in farm lands in that section, and he passes on. The rise in value is itself an argument, and a potent one, and will attract settlers and investors. And there is no factor in any rural district so effective as good roads, and no asset in a county has so great a value among all its utilities.

What the Southern Railway has done,

tion that is being undertaken in all parts of the country. New materials have been the result of scientific study of this important question, and road-building has been revolutionized. Those clothed with the responsibility of the actual construction of good roads have from time to time made experiments with these various materials in order to ascertain their peculiar adaptability to fit varied conditions, and the results of these experiments have been most helpful to them in their work.

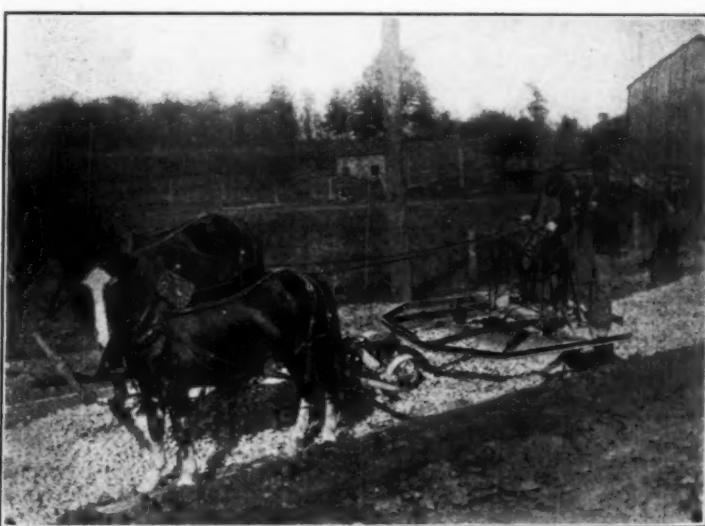
The experimental roadway in Baltimore county is eight miles in length, and 15 different materials have been used in its con-



CONSTRUCTING ROADWAY WITH BARBER ASPHALT CO.'S BERMUDEZ ASPHALT BINDER.

nize the importance of the results that are being determined.

The materials used on the various sections are as follows: Park gate to city line is treated with an emulsion prepared by Headley Good Roads Co., Philadelphia; city line to north of Wiley avenue, heavy application of "Texas Oil" from Texas Company, New York city; north of Wiley avenue to Belvidere avenue, light application of "Texas Oil"; Belvidere avenue to north of Haywood avenue, one car of "Texas Oil" and one car of oil from Gulf



C. N. CARPENTER SUPPLY CO.'S GRADER SPREADING STONE.

what it is doing, what it hopes it may be its privilege to do in advancing the cause of good roads in the Southeast in the coming years springs from a fixed and permanent policy—the upbuilding of the Southeast. It has studied the problems which have appeared to it the most serious ones, and to this study it has given years of research, investigation and effort. And it believes that the great, the overwhelming need of the people of that great region is a universal betterment of conditions between farm and railway. Good roads mean the solution, the achievement.

Washington, D. C.

struction and treatment. The different sections vary in length from 400 to 4000 feet. The experimental roadway was built by Baltimore county under the Maryland State aid law and under the direct supervision of Chief Engineer W. W. Crosby of the State Roads Commission. The roadway was laid between July, 1909, and December, 1910, and it was undertaken for the direct purpose of guiding the State Roads Commission in the construction of improved highways throughout the State which are being built under the \$5,000,000 appropriation.

Chief Engineer Crosby is giving his per-



IROQUOIS IRON WORKS PORTABLE OIL-HEATING TRUCK AND TOOLS.

Refining Co., New York; north of Haywood avenue to south of Rogers avenue, "Fairfield Binder" from Impervious Product Co., Baltimore, and one car of tar from United Gas Improvement Co., Philadelphia; south of Rogers avenue to Glenn ave., one car of tar from Warren Bros., Boston, one car of "Tarvia X" from Barrett Manufacturing Co., Philadelphia, Pa., and one car of "Tarite" from American Tar Co., Boston Mass.; Glenn avenue to Maryland Club, tar from the United Gas Improvement Co.; Maryland Club to 100

R. B. Keyser's place, "Fairfield" and United Gas Improvement Co.'s material; entrance of Keyser's place to 200 yards south of Valley road, United Gas Improvement Co.'s and Consolidated Gas Co.'s material; Valley road south 200 yards, Consolidated Gas Co.'s material; Valley road to foot of hill, special compound from Texas Company; foot of hill to end of road, "Glutrin" (refined waste liquor of sulphite pulp mills), from Robeson Process Co., Au Sable Forks, N. Y.

FROM ROCK TO ROAD.



QUARRYING THE STONE.



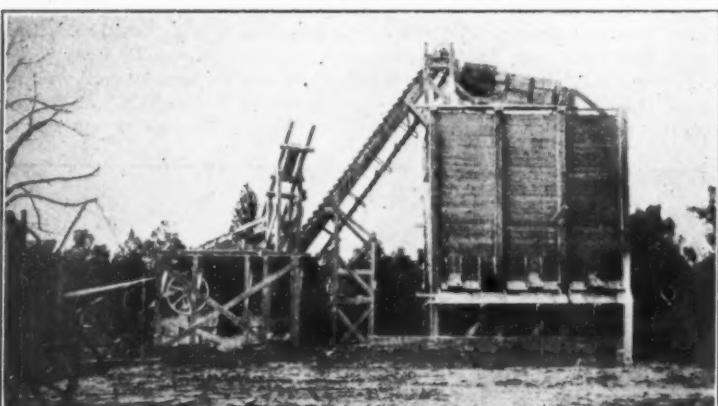
SPREADING AND ROLLING STONE ON ROADWAY.



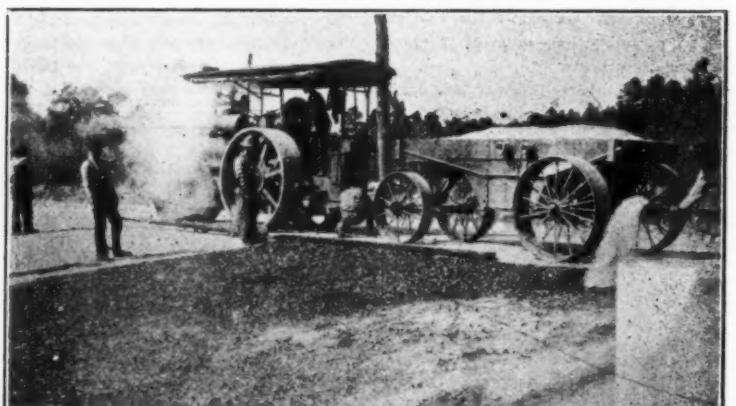
CONVEYING STONE FROM QUARRY TO CRUSHER.



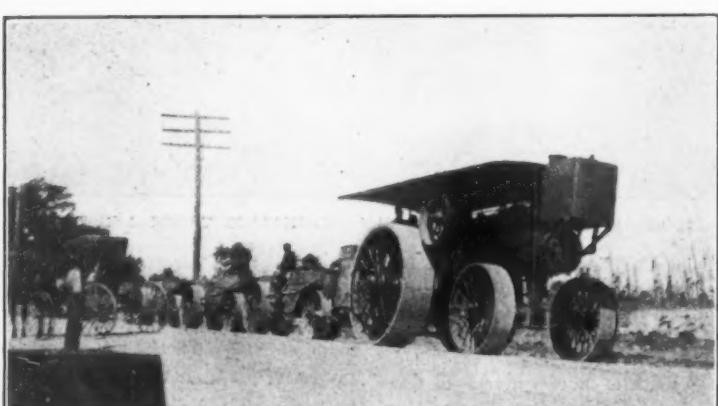
APPLYING HOT BINDER TO ROADWAY.



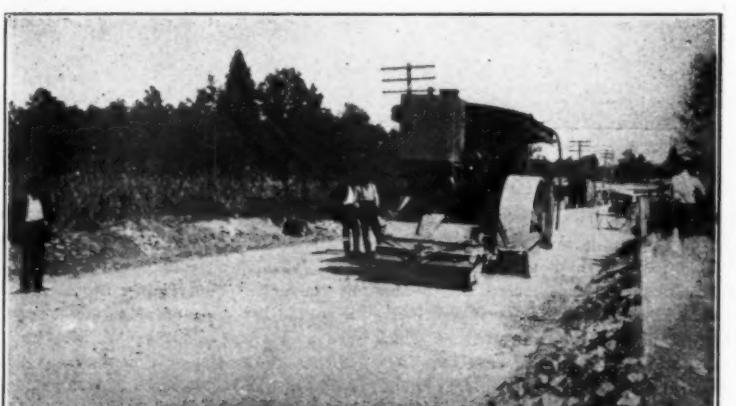
CRUSHING AND SCREENING THE STONE.



SPREADING TOP SCREENING ON ROADWAY.



TRANSPORTING STONE FROM CRUSHER TO ROADWAY.



FINAL ROLLING OF ROADWAY.

BITUMINOUS MATERIALS IN HIGHWAY WORK.

By ARTHUR H. BLANCHARD, Consulting Highway Engineer, Brown University, Providence, R. I.

The development of the use of bituminous materials in the construction and maintenance of roads in the United States since 1908 is worthy of careful consideration and critical analysis.

The bituminous materials which have been used in the United States during the past three years may be classified as follows: Fluxed native asphalts, oil asphalts, residual asphaltic and semi-asphaltic oils, light oils; coke-oven tars, coal-gas tars, water-gas tars, and combinations of coal-gas and water-gas tars; combinations of asphaltic materials and tars.

The nomenclature used to designate the various kinds of tars is self-explanatory. In order to avoid misunderstanding, the terms used in connection with asphaltic materials will be defined, the definitions given being abstracts of those proposed by Provost Hubbard, chemist, United States office of public roads.

"Fluxed native asphalts are native asphalts fluxed with a heavy petroleum residuum. Native asphalts are solid or semi-solid native bitumens, consisting of a mixture of hydro-carbons of complex structure, free from any appreciable amount of solid paraffins, melting upon the application of heat and evidently produced by nature from petroleums containing little or no solid paraffins. Unrefined native asphalts, with few exceptions, contain water, vegetable matter, clay, sand, etc."

"Oil asphalts are solid or semi-solid products produced by the distillation of semi-asphaltic and asphaltic petroleums."

"Residual asphaltic and semi-asphaltic oils are heavy viscous residues produced by the evaporation or distillation of crude asphaltic and semi-asphaltic petroleums until at least all of the burning oils have been removed and often some of the heavier distillates as well."

The term light oils includes crude and partially refined paraffin petroleums, semi-asphaltic petroleums and asphaltic petroleums.

"Paraffin petroleum is an oil the base of which is composed principally of the paraffin hydro-carbons."

"Semi-asphaltic petroleums are oils containing a semi-asphaltic base, i. e., oils whose residues produced by evaporation or distillation, while composed mainly of asphaltic hydro-carbons, contain also a certain percentage of paraffin wax."

"Asphaltic petroleums are oils containing an asphaltic base, i. e., they are capable of producing residues very similar to native asphalts if evaporated or distilled down to the consistency of such asphalts. They contain little or no solid paraffins. Native asphalts are probably produced from such oils by natural processes."

As typical of the practice in the United States will be cited the work of seven State highway departments which have used bituminous materials extensively. The writer wishes at this time publicly to thank the highway departments of the States mentioned below for their co-operation in collating the following information. The figures given refer to the total amount of work of the various types indicated which has been accomplished in 1908, 1909 and 1910 by the State highway departments of the States of Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania and

*A paper presented before Section D of the American Association for the Advancement of Science at the Minneapolis meeting.

Rhode Island. The work has been classified on the basis of the method employed and the kind of material used. Three general methods are referred to, namely, superficial treatment of roads constructed of ordinary macadam or gravel, the construction of bituminous pavements by penetration methods, and the construction of bituminous pavements by mixing methods. The bituminous materials employed have been classified in three groups: First, tars and tar-asphalt compounds; second, fluxed native asphalts, oil asphalts and residual asphaltic and semi-asphaltic oils; third, light oils.

The following tables give the amount in square yards of surfaces treated and bituminous pavements constructed by the State highway departments mentioned above during the years 1908, 1909 and 1910:

Superficial Treatment of Roads.			
Tars and tar-asphalt compounds.	Fluxed native asphalts, oil asphalts and residual asphaltic and semi-asphaltic oils.	Light oils.	
1908.....	57,700 sq. yds.	23,500 sq. yds.	
1909.....	95,500 sq. yds.	910,600 sq. yds.	4,125,900 sq. yds.
1910.....	123,400 sq. yds.	2,434,200 sq. yds.	9,890,400 sq. yds.

Bituminous Pavements Constructed by Penetration Methods.			
Tars and tar-asphalt compounds.	Fluxed native asphalts, oil asphalts and residual asphaltic and semi-asphaltic oils.	Light oils.	
1908.....	37,900 sq. yds.	25,200 sq. yds.	
1909.....	170,200 sq. yds.	2,677,400 sq. yds.	
1910.....	329,300 sq. yds.	4,840,200 sq. yds.	26,500 sq. yds.

Bituminous Pavements Constructed by Mixing Methods.			
Tars and tar-asphalt compounds.	Fluxed native asphalts, oil asphalts and residual asphaltic and semi-asphaltic oils.	Light oils.	
1908.....	52,100 sq. yds.	4,400 sq. yds.	
1909.....	136,000 sq. yds.	219,500 sq. yds.	
1910.....	158,000 sq. yds.	432,600 sq. yds.	

It is interesting to note from the standpoint of the general increase in the use of bituminous materials in the States cited that in 1908 bituminous materials were employed in the construction and maintenance of 416,000 square yards of road surface, in 1909 of 7,734,000 square yards and in 1910 of 18,244,000 square yards. Although the construction of bituminous surfaces and bituminous pavements is in its infancy in the United States, remarkable progress is being accomplished in certain sections. For instance, by the close of the construction season of 1911, if the plans of the State Highway Commission are carried out, the State of New York will have a trunk highway with a bituminous surface extending north from New York city to Albany, and thence west to Buffalo, aggregating over 400 miles in length.

In the surface treatment of macadam and gravel roads several lines of development have been especially noticed: first, a more general use of refined coal-gas and water-gas tars in place of crude tars; second, an extraordinary increase in the various kinds of heavy asphaltic oils, combined with sand, gravel or stone chips to form a carpet wearing surface; third, an increase in the use of light oils for the purpose of allaying dust on State roads, and thus to a certain extent preserving the surface of the road by the retention of the top-dressing; fourth, a substitution of mechanical distributors of both the pressure spray and gravity flow type in place of hand application methods.

The practice of the past three years has amply demonstrated that the success of superficial tarring is dependent upon the recognition and adoption of those fundamental principles which were laid down by the French engineers in 1903. As those principles have not been adopted in

many instances in the United States, they will be given here in brief: First, superficial tarring should be done only during dry and warm weather in order to obtain efficient and economical results; second, the road must have a dry, smooth and durable surface; third, all dust must be thoroughly brushed off in order to facilitate the adherence of the tar; fourth, after the distribution of the coat of tar it is necessary, in order to avoid a slippery surface, to apply a dressing of sand, gravel or stone chips. The practice of some prominent English engineers does not include the adoption of the fourth recommendation cited, as it is maintained that a top-dressing is not an essential element of a non-slippery tarred surface.

A well-developed plan of annually treating certain roads of a system with a thin coat of bituminous material is being adopted in certain States. This practice embodies the recognition of the fundamental principles of economy and efficiency in modern highway construction, namely, the adaptation of method and material to local conditions.

In connection with the use of bituminous materials by penetration methods

filled with the bituminous mastic. After consolidation a second coat of refined tar is applied. As soon as possible after spreading the second coat of tar a layer of stone chips is spread and rolled. A third coat of refined tar is then applied and the surface finished by rolling a covering of screenings or sand.

In the reconstruction of old roads there has been a general employment of the method of picking up the old surface to a depth of two to four inches by the use of mechanical scarifiers, placing a thin coat of new road material on the loosened surface and then constructing a bituminous pavement by the penetration methods.

In both the construction and reconstruction of roads by penetration methods the surface is finished in various ways. One method is to spread a coat of chips or sand after the first coat of bituminous material is applied, roll thoroughly, and after the road has set up sufficiently open it to traffic. Another method is to apply a second coat of bituminous material before the application of a layer of chips. The bituminous material for the flush coat may or may not be the same as used for the first coat. A layer of chips or sand is then spread over the flush coat and thoroughly rolled. A third method is essentially the same as the second method cited, except that a layer of chips is applied to the first coat of bituminous material, thoroughly rolled and the surplus chips brushed off before the application of the flush coat of bituminous material.

From the standpoint of the character of bituminous material used it is of especial interest to note the increased use, particularly in 1909 and 1910, of fluxed natural asphalts and oil asphalts especially manufactured for application to unheated crusher run stone.

In the construction of bituminous pavements by the mixing method a number of improvements and developments should be noted. Some attention has been paid to having the stone dry and reasonably clean. Although the advantages accruing by using clean and dry stone are recognized, the practice has been far from satisfactory, only very crude methods having thus far been employed. The practice of heating stone on plates has been used to a certain extent with deleterious results. In a few cases mixing machines and tar-coating machines have been employed in connection with the construction of bituminous pavements which are to cost not over 90 cents to \$1 per square yard. The types of the mixers which have been used to date are more or less unsatisfactory, especially when bituminous materials are used which are solid at ordinary temperatures or which flow with considerable difficulty when cold. During the season of 1911 considerable development should take place in the heating of stone by mechanical dryers and also in the use of new types of mixers especially manufactured for the purpose of mixing bituminous materials with a mineral aggregate.

The mixing of broken stone or other aggregate with bituminous materials at a central plant and shipping the finished product by rail has not been developed to any extent in this country. The product of one company, however, has been used quite extensively in three or four States. In another case refined asphaltic petroleums have been mixed with sand and gravel and molded into blocks at a central plant. The blocks have been laid as the wearing surface and rolled.

Bituminous pavements constructed by mixing methods have been finished in different ways. In certain instances satisfactory results have been attained by applying a coat of chips or sand to the surface of the course of mixed aggregate and

thoroughly rolling the same. In other cases a flush coat of bituminous material has been applied before the layer of mineral matter is spread over the surface. The bituminous material used for the flush coat in many bituminous pavements is not the same as was used in the mix.

In the above discussion of the mixing method it should be noted that the remarks do not in general apply to bituminous pavements constructed by mixing a carefully-graded aggregate and bituminous materials, and hence do not refer to many types of bituminous pavements which have been used to a considerable extent in the construction of streets in municipalities.

In various parts of the United States sand, gravel and earth have been mixed in place by various processes with bituminous materials in the endeavor to form an impervious, dustless and durable road surface. This work is being watched with considerable interest, as the utilization of local materials for the aggregate in many instances reduces the cost of construction materially. The limitation in the weight of traffic to be carried throughout the year under all climatic conditions is one of the most important points under discussion at the present time in connection with the above methods.

A new type of construction recently introduced by Logan Waller Page, director of the United States office of public roads, is known as oil-cement concrete. In this process fluid residual petroleum is added to the usual ingredients composing concrete.

From the standpoint of the nature of the material used, again it is noted that there is an increase in the use of refined tar, considerable employment of heavy asphaltic compounds and also the employment of combinations of tar and asphalt, the most noticeable increase, however, being in the use of heavy asphaltic oils, which can be mixed readily with broken stone as it comes from the crusher.

There has been a marked tendency on the part of highway engineers during the past three years to appreciate more fully the importance of the various chemical and physical properties of bituminous materials. Many engineers and manufacturers now wisely advocate using different grades of the same type of bituminous material for varying local conditions and for different methods of bituminous construction. During 1909 and 1910 bituminous materials for use in the construction and maintenance of roads have been purchased in two ways, namely, by buying direct from the manufacturer a product known under a trade name and by purchasing the material under specifications. The old custom of simply purchasing bituminous material under a trade name without investigation of its properties is being replaced by the second method. The object of the second method has been to cover one or more of the following points:

First, to secure uniformity in the material furnished for a given contract; second, to obtain a compound which conforms to certain requirements with reference to the chemical and physical properties of the material which are considered essential; third, to provide a standard by which it is hoped that a satisfactory material may be duplicated on other contracts. The effect of the various physical and chemical properties of bituminous materials on their value as road binders is being investigated by a special committee of the American Society of Civil Engineers. Standard methods of testing bituminous materials is the subject of investigation by a sub-committee of the American Society for Testing Materials.

In this country, as well as in Europe,

considerable confusion results due to the lack of uniformity among engineers, chemists and manufacturers relative to the nomenclature of bituminous materials. Until a recognized nomenclature is adopted it will be advisable to define methods and materials in order to avoid misinterpretation of information furnished relative to the construction and maintenance of bituminous surfaces and bituminous pavements.

AUXILIARY STEAM PLANT.

Southern Power Co.'s Undertaking at Greenville.

[Special Cor. Manufacturers Record.]
Greenville, S. C., April 29.

The Southern Power Co. will put in operation in the suburbs of Greenville within a few weeks its large auxiliary steam plant. The building and reservoir were built by the Dixie Concrete Co. of Greenville. The building, sub-transformer station and the cottages in the group were constructed with the unit pressed brick, which were manufactured by the Carolina Brick & Tile Co. of Greenville, while the foundations were concrete. The generator, turbine and other electrical machinery used was furnished and installed by the Westinghouse Electric & Manufacturing Co. of Pittsburgh, Pa. The large smokestack for the plant was built by the Alphons Custodis Chimney Co. of New York.

Aside from the main plant there are in the group around it a sub-transformer station, two residences for the use of the families of the men in charge of the plant, four lightning arrestors with a total voltage of 100,000, one surface tank and a large reservoir.

One-half of the space in the steam plant is taken up by six boilers. Each one has a capacity of 1125 horse-power. In these boilers there is an average of 190 pounds of boiler pressure per square inch. In order to keep a full supply of coal on hand at all times a storage capacity of 2500 tons has been provided. The turbine and generator-room take up the remaining portion of the building, and the size of this room is 40x70 feet, with large windows on three sides, giving the space plenty of light. Among the other interesting electrical devices located in this room, aside from the generator and turbine, is an electric-driven crane, which has a lifting capacity of 40 tons. This crane is at present being used to good advantage by the Westinghouse men in placing the large parts of the generator and turbine. This crane will be used in the building permanently. The dynamo generates 21,000 amperes and 2200 volts of electricity. The work of installing the large generator and turbine is going forth steadily, and will be ready for use shortly.

The smokestack measures 230 feet above the foundation, with a flue space of 14 feet. It is by far the largest in the city or the surrounding territory.

The sub-transformer station, as mentioned above, is similar to all the others used by the Southern Power Co. over its territory, and with a capacity of 18,000 kilowatts is large enough to furnish power for all local usage.

The plant was erected and the machinery for it was installed under the direct supervision of the engineering department of the Southern Power Co. The superintendent of construction was John Keigler, a graduate of Clemson College of this State. S. H. Owens will be the engineer in charge of the large plant in the future. W. O. Pratt of Charlotte, N. C., of the engineering force of the power company, will in a few days turn the plant over to his care.

Work began a few months ago on a duplicate plant to be built for the South-

ern Power Co. at Greensboro, N. C. The Dixie Concrete Co. and practically all the other contractors that have been mentioned above are in charge of their respective departments in the construction of the plant that is being erected in the North Carolina city.

Roy G. BOOKER.

Removing a Large Warehouse.

[Special Cor. Manufacturers Record.]
Greenville, S. C., April 29.

In moving its old Greenville warehouse piece by piece, from Buncombe street, where it has been since it was erected 10 years ago, to a new site on Anderson street, near the Columbia & Greenville Railway depot, nearly two miles away, the Virginia-Carolina Chemical Co. is carrying out a job of large proportions. In February, 1910, the chemical and manufacturing part of this plant was burned, and all that was left was the large warehouse. It was announced recently that the F. W. Poe Manufacturing Co. had purchased the 40 acres of land owned by the Virginia-Carolina Chemical Co. for its use. Following this announcement came the one that the Virginia-Carolina Chemical Co. had purchased property of about the same size, and that the building on Buncombe street would be taken to pieces and moved there. This work began some time ago, and car after car of the parts of the large warehouse have been shipped across the city. It is estimated that the part of the plant that is being removed was 100x250 feet. When it is all transferred to the new site a large addition will be added. F. M. Desaussure, who has been in charge of the plant since it was built, will have charge of the new plant. He states that he expects to have the new plant in readiness by the early fall.

Roy G. BOOKER.

Little Rock Street Improvements.

[Special Cor. Manufacturers Record.]
Little Rock, Ark., April 25.

A great deal of paving and public work generally is being done in Little Rock. W. W. Dickinson will this week complete the 23d street brick pavement from Main to Wolfe, 17 blocks. M. D. L. Cook reports the completion of the following pavement contracts: West 6th street, 16,500 yards, 13 blocks, sheet asphalt; 8th street from Battery to Victory and six blocks on other streets, macadam and asphalt binder; 13th street from High to Summit, five blocks, macadam, with asphalt binder; Scott and Rock streets, asphalt concrete resurfacing over old brick pavement, \$50,000; 10th street from Main to City Park, four blocks, asphalt concrete. The Wetterstrom Company, Chicago, will this week finish paving 10 blocks on Main street with wooden blocks, a very superior piece of work and constructed especially at this time for the Confederate Reunion, which will convene here May 15. This entire new paved street will be the Court of Honor during the reunion.

Mississippi Factories.

Figures of the census of manufacturers in Mississippi in 1909, added to those of seven other Southern States which have been published in the MANUFACTURERS RECORD, make a total value of products for eight of the fourteen Southern States of \$1,317,699,000, an increase over 1904 of \$354,087,000, equal to 34.7 per cent. In the five-year period the number of factories in Mississippi increased from 1520 to 2598, or 71 per cent.; the number of salaried officials or clerks from 2688 to 3403, the average number of wage-earners from 38,690 to 50,384, or 30 per cent.; the capital invested from \$50,256,000 to \$72,393,000, or 44 per cent., and the value of products from \$57,451,000 to \$80,555,000, or 40 per cent. These figures do not include steam laundries, which had a capital of \$322,000 in 1909.

In connection with the annual meeting at Macon, Ga., June 14-16, of the Oil Mill Superintendents' Association there will be an exhibition of oil-mill machinery and supplies.

Southern Cotton-Mill Mergers.

[Special Correspondence Manufacturers Record.]

Charlotte, N. C., May 1.

Of more than ordinary interest was the meeting here today of a large number of the hard-yarn spinners of North and South Carolina to discuss a plan of merger. It is estimated that something like 400,000 spindles are represented.

If the merger is carried through a selling plan will be adopted, whereby undue competition will be prevented and permit of the manufactured goods being sold at a fair profit.

The meeting was presided over by Mr. W. D. Turner of Statesville, N. C., with Mr. Robert Reinhardt, Lincolnton, N. C., as secretary. The chief promoters of the mill merger are generally understood to be Mr. Frank L. Underwood and Leonard Paulson, both of New York, and Mr. Robert Reinhardt of Lincolnton, N. C. They propose merging into a large corporation certain yarn mills in the Southern States, which shall be capitalized as follows: 30-year 6 per cent. first mortgage bonds, \$10,000,000; 7 per cent. preferred stock, \$12,500,000; common stock, \$12,500,000.

These securities are to be issued on the basis of 1,000,000 spindles to be acquired or properties of value of \$25,000,000. For any less number of spindles or less value in property, a proportionate amount of securities shall be withheld, but no greater sums shall be paid for plants than called for by the valuation hereinafter provided for.

The bonds are to be sold at the best price obtainable, and the sum remaining above the \$5,000,000 needed for the purchase on following plan shall be paid into the treasury of the company as working capital.

To effect the sale of bonds a moderate commission will probably have to be paid in both classes of stock in addition to a cash commission. For services rendered, the promoters are to receive 10 per cent. of each of the stocks, common and preferred.

In taking over the mills their present quick assets will be paid for in cash, less any floating debt that may be existing.

The company will be formed also as a holding company, that in certain cases the stocks of the existing companies may be held in the treasury of the company in lieu of the properties which they represent.

The valuations fixed upon the properties will be those made by Messrs. Lockwood, Greene & Company or some equally high authority, to which 25 per cent. shall be added as a settlement price, and there shall be paid to the owners the following sums in cash and securities in proportion to the said valuations: Twenty per cent. thereof in cash, \$5,000,000; 40 per cent. in preferred stock, \$10,000,000; 40 per cent. in common stock, \$10,000,000.

This proposal is based upon an estimate of earning of \$1.50 per spindle per year over a period of the last six years.

Each company shall, in addition to furnishing the valuation by Lockwood, Greene & Company, or some equally high authority, furnish a detailed profit and loss account for the six years' business last past, abstracts and certificates of title to properties and access to their books for the verification of all statements.

The control of the company to be vested in a board of directors, 15 in number, made up from the present mill owners, except as to three to be nominated by the promoters.

The cost of valuation to companies enter-

ting into it in case merger is completed.

This is the second meeting held in the interest of merging the yarn mills of the South, the other one being held in Washington a few weeks ago.

Among the manufacturers here today were:

W. M. Hamer, president of the Dillon Mills, Dillon, S. C.; T. K. Elliott, president Wylie Mills, Winnsboro, S. C.; W. L. Holt, president Holt Mills, Fayetteville, N. C.; Robert Reinhardt, Lincolnton, N. C.; J. A. Abernathy, president Wampum Mills, Lincolnton, N. C.; A. P. Rhyne, president Mt. Holly Cotton Mills, Mt. Holly, N. C.; J. F. Taylor of the Kinston Cotton Mills, Kinston, N. C.; J. C. Smith, Sheeby, N. C.; T. J. Lillard, Thomasville, N. C.; J. S. Wier, treasurer Atherton Mills, Charlotte, N. C.; J. C. Rankin, Lowell, N. C.; W. T. Love, Lowell, N. C.; S. M. Robinson, Lowell, N. C.; E. N. Rudisill of the Indian Creek Manufacturing Co., Lincolnton, N. C.; W. D. Turner of the Monbo Mills, Statesville, N. C.; T. D. Miller, Statesville, N. C.; M. D. Mills, Paola Mills, Statesville, N. C.; Henry Wilson, Taylorsville, N. C.; J. O. White of the Modena Mills, Gastonia, N. C.; J. A. Hadley, president, Mt. Airy, N. C.; Hadley Peoples Manufacturing Co. of Siler City, N. C.; J. C. Gregson, secretary-treasurer Hadley Peoples Manufacturing Co. of Siler City, N. C.; W. M. Moore of the Wymajo Mills, Rock Hill, N. C.; D. M. Warlick of the Double Shoals Manufacturing Co., Granite, N. C.; J. K. Dixon of the Trenton Cotton Mills, Gastonia, N. C.; D. M. Carpenter, Maiden, N. C.; D. W. Aderholt, treasurer Henry River Manufacturing Co., Hildebran, N. C.; Leonard Paulson, New York; Frank L. Underwood, New York.

J. LOUIS SPENCER.

IN STAGES OF MERGING.

Three Mill Corporations to Have Headquarters at Greenville.

[Special Correspondence Manufacturers Record.]

Greenville, S. C., May 1.

When all present plans are complete there will be located in this city the offices and the head officials of three corporations composed of a number of cotton mills in the South which have combined their interests. The names of those three organized or proposed mergers are the Parker Cotton Mills Co., organized; the Peizer Corporation, proposed, and the Woodside Cotton Mills Co., now in process of organization.

The first set of mills that organized into one large combine was the Parker Cotton Mills Co., of which Lewis W. Parker is the president. The actual process of organizing took place since the first of the year. The mills entering into this combine were the Monaghan Mills, Greenville; the Victor Manufacturing Co., Apache Mills, and the Greers Manufacturing Co. of Greers; the Olympia Cotton Mills, Granby Cotton Mills, Richland Cotton Mills and the Capital City Mills of Columbia; the Beaver Dam Mills, Edgefield. The capital stock of the Parker company is \$10,000,000, and the total spindleage under the control of it is 358,000.

While the Peizer Corporation, of which Capt. Ellison A. Smyth of Greenville will probably be the president, is more of a proposed than a standing organization, it will undoubtedly be formed in the near future, and, in fact, a statement made by Captain Smyth in last week's MANUFACTURERS RECORD warrants this assertion.

However, at this writing no further details could be obtained from Captain Smyth.

John T. Woodside states that the Woodside Cotton Mills Co. is being formed, with a capital stock of \$3,000,000, for the purpose of consolidating the Woodside Cotton Mills of Greenville, the Fountain Inn Manufacturing Co. of Fountain Inn and the Simpsonville Cotton Mills of Simpsonville, all in South Carolina. These mills have about 137,000 spindles, with accompanying looms, for cloth production. The new company is organizing with John T. Woodside as president and J. David Woodside and E. F. Woodside as vice-presidents.

There was a rumor in Greenville to the effect that four of the mills in South Carolina and Georgia, of which John M. Geer is president and treasurer, would be combined into one organization and the work carried along in a like manner to the ones that have been mentioned above, with headquarters in Greenville. These mills are the Easley Mills, Easley; Franklin Mills, Greers; the Hartwell Mills, Hartwell, Ga., and the Lois Cotton Mills, Douglasville, Ga. Mr. Geer says:

"I have studied the matter of mill mergers to a certain extent, but not with the special view to merging the companies or trying to have them consolidate. I have no idea at present of starting any such movement, and have no future date set to go about such a task."

As to advantages to be obtained in combining the several mills over the adjacent territory under one head, Lewis W. Parker in an interview with the MANUFACTURERS RECORD said:

"I have been connected for a number of years in the direct management of eight cotton mills, and had large interests in and indirect with the management of several others that have been operating their plants independently. There was imposed on me a great amount of detail work. Through the merger of these plants there will be a great reduction in the amount of detail, and therefore the personal consideration entered in the question.

"In addition to that, however, where the plants were independently operated there could not be the same unity of management and consistency of purpose. Under a merger of the plants it will be practical to have the various departments controlled by the same individuals leading to a specialization of work and perfection of management. This would more or less cause reduction in the force employed, and some economy would be evident in that manner.

"The principal advantage, however, lies in the ability to lay out the production of the plants in such a way that there will be no competition between them and no duplication of product. At the present time several of the mills are manufacturing two or three classes of goods. In the future the mills that have a specialty and can manufacture that one class to a better advantage can specialize on that one grade, and thereby increase the output. Then the other mills that make a specialty of the grade of goods that is not manufactured advantageously by the other will make up the difference by manufacturing it, and both will increase the amount of productiveness. In that way it will decrease the number of grades of cloth manufactured by one mill.

"Another advantage will be the average results obtained by a number of plants, and in this way secure the greater assurance of fair average results each year.

"Increased size of the plants will also enable the corporation to borrow its commercial needs at a reduced rate of interest.

est as compared to what each individual plant could."

There is another saving that could be counted in the management of a number of mills under one head—the buying of supplies, such as coal, etc. By buying it in large contracts a natural saving all around would be the result.

The corporations that have been reported have not been formed long enough to show the good or bad results of the combine. The idea prevails in Greenville that the movement on the part of the mill men to make these great combines is a good one, and is destined to do much toward developing the industry and bettering the financial conditions all around.

ROY G. BOOKER.

ENGLISH SPINNERS INTERESTED.

The 32,000-Acre Cotton Plantation Planned in Mississippi.

Mr. L. K. Salsbury of Memphis, Tenn., who will be the president of the two companies organized, each with a capital stock of \$1,500,000, to operate the 32,000 acres of cotton lands in Bolivar and Washington counties, Mississippi, sends the MANUFACTURERS RECORD, in addition to the facts on the subject published in its issue of April 27, the following details:

"The Fine Cotton Spinners of Manchester, England, guaranteed the bonds issued by these companies. It is purely a local proposition except the financing of part of the money in England. Executive offices will be in the Central Bank building, Memphis, while stores, plantations, oil mills, gins, etc., will be at Scott, Miss. There will be a large amount of money spent in draining and generally improving this property. It will be the largest plantation in the world, and will be farmed scientifically with the expectation of raising 25,000 bales of cotton per annum, which will be marketed wherever the best and highest price can be obtained."

About a year ago Mr. Salsbury and others bought 12,000 acres of land at Robinsonville, Miss., and organized the Mary Mac Plantation Co. Since then an entirely new ginning plant with two cotton compresses has been completed and a cottonseed-oil mill has been installed. Cotton from the plantation has been sold this year directly to the mill to a great extent. A bale of cotton compressed at the plantation was shipped direct to England and exhibited on the Royal Exchange at Manchester and the Cotton Exchange at Liverpool, where it was highly complimented. The oil mill is in operation this season. Other extensive improvements have been made as a basis for a model plantation.

Choctaw Plant Nearly Completed.

The Choctaw Portland Cement Works of Hartshorne, Okla., will soon be completed. This company has had its plant under construction for some time, the contractor being the Freeborn Engineering & Construction Co. of Kansas City. Its buildings are completed with the exception of the stockhouse, which is about half finished. The machinery is now being installed, and includes an 8x26 tube mill, which the company believes is the largest tube mill ever built. The company is now engaged in delivering crushed rock to a railway from which contract has been received for 250,000 yards of this material. C. B. Blake of Hartshorne is president and F. W. Freeborn of Kansas City is purchasing agent of the Choctaw Portland Cement Works, the capital of which is \$1,200,000.

The Oil Mill Superintendents' Association and the Oil Mill Machinery Manufacturers' and Supply Association will meet at Galveston, Tex., May 25-27.

INCREASING SOUTHERN FARM ACREAGE.

MISSISSIPPI CUT-OVER LANDS.

Organization for Colonization of Thousands of Acres.

The Mississippi Colonization Association, with headquarters at Hattiesburg, has been organized as a State movement for the purpose of securing settlement of the cut-over pine lands of Southern Mississippi. This association has been organized and will be incorporated under the laws of Mississippi with a capital of \$250,000. People owning these cut-over lands, or at least many of them, have long tried to find some way of getting these lands on the market and attracting settlers. While they have planned and thought and conferred on the subject, the cut-over acreage has constantly increased until today it amounts to about 3,000,000 acres. This area is increasing at the rate of about 60,000 acres a year.

Settlement has been very slow. The peculiar feature of it has been that no one ever questioned the virtue of the soil. Wherever farms have been started they have produced magnificently, but enough farmers from the outside have not come in to sufficiently spread the good report. Numerous clear streams cover this entire section; it is well watered and just rolling enough to be splendidly drained. Always two and usually three crops and an abundant yield are absolutely assured in all this territory.

At the request of Mr. Julius S. Thompson of Chicago and his associates Governor Noel appointed Mr. H. A. Camp, president of the Hattiesburg Trust & Banking Co. of Hattiesburg, Miss., as trustee of the State to co-operate in the movement of the Mississippi Colonization Association.

The plan is to give away absolutely free, and through a free registration, no less than 2500 farms of 40 acres each. The landowners have been requested to place this land in the hands of the trustee, the allotment to be to actual settlers on condition that settlement be made in one year and that the land be cleared of stumps and cultivated for three consecutive years. The settler, having complied with these terms, secures a deed, the Mississippi Colonization Association guaranteeing the title of each 40 acres to the value of \$1000.

If any of this land remains unsettled at the end of one year, or if any settler fails to cultivate his 40 acres as provided in the terms of his contract, such land held by the trustee reverts to the original owner, with all the improvements made thereon.

The Mississippi Colonization Association, assuming the task of disposing of these gift lands under direction of the State trustee, guarantees to expend \$100,000 in advertising, in addition to undertaking all the other expense incidental to the surveying and platting of land, insurance of titles and locating the settlers.

The association proceeds on the assumption and belief that the settlement of these 2500 farms will enable them to sell a great many thousands of farms to others.

Big Texan Irrigation Project.

[Special Cor. Manufacturers Record.]

Pecos, Tex., April 27.

The Consolidated Mutual Reservoir Co., with headquarters at Grand Falls, Ward county, Texas, has been incorporated under the laws of Texas with a capital stock of \$600,000, and will take over the properties of the three other companies which for several years have been in operation at Grand Falls. Surveys have already been made and contracts will be awarded at once for the construc-

tion of three large reservoirs to impound the flood water, distributing the same as needed for irrigation. M. L. Swinehart, the newly elected secretary-manager for the company, says that the construction of levees to form the reservoirs will require the handling of over 700,000 cubic yards of earth, and the total cost of the three reservoirs will exceed \$250,000. Work is to begin at once and 20,000 acres will be irrigated to start with. In addition to this work, the main canals leading from the Pecos River will be greatly enlarged so as to provide a larger carrying capacity to the reservoir during flood times. The plans also provide for the construction of 50 miles of main canals in addition to the canals already completed under the three old systems.

The officers of the new consolidated company are among the leading business men of the Pecos Valley and the East. The president is M. T. Eudaly, formerly of Indiana, and he is today one of the largest owners of irrigable lands in the Southwest. Vice-president Gaylor is an Illinois man, who recently purchased 1000 acres of land near Grand Falls. H. E. Moore, treasurer; M. L. Swinehart, secretary, and J. L. Farley, J. B. Smith and W. A. White, who, with the other officers, constitute the directors, are all men of large business capacity and influential in the development of Pecos Valley properties.

PORTER W. WHALEY.

Reclaiming Louisiana Lands.

Referring to its plan for reclaiming lands, the Morgan City Land Co. of Morgan City, La., writes to the MANUFACTURERS RECORD as follows: "We have already spent more than \$50,000, and expect to make expenditures aggregating over \$250,000 within the next year or so, which will enable us to invite the Northern and Western farmer to a soil which may be purchased at a moderate price and upon which four crops may be raised annually." Further details are given by K. S. Foster of the company as follows:

"There are hundreds of thousands of acres of unclaimed lands along the coast of Louisiana, all of which could be made habitable. The land is the richest in the world, not excepting the Nile Valley. The area to be reclaimed comprises about 20,000 acres of wooded and marsh land.

"The funds are raised by bond issues made possible by a recent law passed by the Louisiana Legislature. The law means much to the State in general, because irrigation and drainage projects cost money, and lots of it, and only through making future generations bear part of the burden is it possible to place the land in position to produce a future income. The cost of draining and preparing the land will be considerably more than the land is worth, or will be worth, including its yield, for the next few years; hence an extended bond issue is the only way out of the dilemma. The law provides for the formation of a drainage district, the appointment of drainage commissioners after the citizens approve the measure, and the refunding of the money.

"This is one of the first experiments made under the new law, and its success will probably lead to the attempt at reclamation on a large scale. In fact, all Southern Louisiana, especially the sugar-belt region, is reclaimed land, but it is that land near the banks of streams, where the cost of reclamation was at the minimum. The project undertaken in the Avoca drainage district includes lands well up high water from the Gulf. The project is very similar to methods made use of in reclaiming the lowlands of Hol-

land and Belgium. The Morgan City Land Co. is simply a holding concern, and should not be confused with the Avoca drainage district and the latter's commission. The land company bought in most of the land in the district in order to meet with no legal opposition in case the law be later found defective by the higher courts. John A. Henry N. and Eugene A. Pharr own all lands not owned by the Morgan City Land Co. in the district, which means that the experiment must be a success. The dredging will cost about 10 cents per square yard, and will be done by a Boston and Galveston concern. The vast area of land in the district is bonded at \$300,000, with 4 per cent. interest, payable annually.

"The land when drained will be worth \$2,000,000 easy, while it is now valueless. The owners figure that \$300,000 will put the land in good shape, and little more will place it on the market. The project is not purely for the purpose of selling the land, for the Pharrs own 2000 acres of this district, which 2000 acres are not for sale at any price.

"Plans and specifications are now before many of the largest contracting firms in this country, including most of your advertisers. Consequently, the contracts for the large pumping plants will not be awarded until these firms have submitted their bids.

"The firm doing the excavation is the Bowers Southern Dredging Co. of Boston and Galveston, Tex. This is an undertaking probably involving greater expense and more work than the installation of the pumping plants. R. P. Clark is at the head of the dredging work. Mr. Clark is well known around Washington, and is interested in the Bowers Southern Dredging Co. That same concern is dredging the deep-water channel for Berwick and Morgan City, where the Government will spend \$1,000,000 to make these two small towns deep-water ports. Mr. Clark also filled in Galveston Island, which was raised some 12 feet above its former level, this including the city of Galveston.

"The engineering work of the Avoca drainage district is in charge of Warren B. Reed, an engineer of some note of New Orleans. Mr. Reed is also in charge of the channel construction work, in conjunction with the United States engineer, who has general supervision of the canal digging from Berwick Bay to the sea.

"In charge of the Avoca drainage district mechanical engineering work is W. H. McGrath, who has for several years been doing a similar work along the Rio Grande Valley in Texas and Mexico where irrigation presents similar problems as drainage offers here.

"So certain are the gentlemen in charge of the work of their success that actual work was begun before the bonds were even approved by the property-holders. To offset any trouble which might arise, the Morgan City Land Co. bought in the majority of acreage, which, with the holdings of J. N. Pharr & Sons, Ltd., gives them control of the whole island.

"The Morgan City Land Co. spent nearly \$50,000 on the property before the funds of the bond issues were touched. The Pharrs had also spent large sums draining the portion they had under cultivation, which amounted to about 2000 acres or 2500.

"At the head of the whole work is E. A. Pharr, secretary and treasurer of J. N. Pharr & Sons, Ltd., one of the largest sugar-cane planters and manufacturers in the South. Mr. Pharr is also interested in many financial institutions in this part of the State. He was instrumental in organizing the company which made deep water for Berwick and Morgan City an accomplished fact."

DRAINING 115,000 ACRES OF LAND

Spending \$1,000,000 Upon One Reclamation Project in Florida.

The Fellsmere Farms Co., Fellsmere, Fla., is engaged in constructing, at a cost of about \$1,000,000, a vast drainage system applying to 115,000 acres of land, covering five townships in Brevard and St. Lucie counties, lying about nine miles west of Sebastian, on the Florida East Coast Railway. A letter to the MANUFACTURERS RECORD from the firm that is executing the work, J. G. White & Co., engineers and contractors, 43 Exchange Place, New York, and 9 Cloak Lane, London, E. C., gives some information regarding the methods and extent of the development. The tract is reached by a railroad owned by the company, connecting at Sebastian with the main line of the Florida East Coast Railway and terminating at present at the town of Fellsmere, on the eastern boundary of the company's tract. The system will consist of gravity drainage canals, laterals and ditches that will lower the water to more than five feet below the surface of the tract. Four large Lidgerwood-Crawford excavators of the drag-line type are at work day and night cutting through a sandy pine ridge which at present forms an elevation sufficient to impound the water that submerges this tract during the rainy season. This cut is being carried on at the rate of one mile per month, the cut being 45 to 65 feet wide on bottom, maximum slopes 2 to 1, and forming a canal 8 to 18 feet deep. An all-steel dredge with dipper of 2½ cubic yards capacity and 70-foot boom is being assembled by the American Steel Dredge Co. of Fort Wayne, Ind., which will be used to excavate 12½ miles of canals through Lake Wilmington, a fresh-water basin which covers 6000 acres, and on to the southern boundary of the tract. Other machines will cut 45 miles of laterals and 500 miles of sublaterals, dividing the tract into subdivisions of 10-acre farms, requiring in all over 6,000,000 cubic yards of excavation.

The operations of the Fellsmere Farms Co. have been carried on for the past year, and dredging began in January, 1911, but little publicity has been given the work, as the company has devoted its time and energy to development work solely. At Fellsmere signs of progress and development are seen on all sides. A 10-acre demonstration farm is located there, on which all varieties of vegetables grown in Florida are raised in abundance. The Fellsmere Hotel and other buildings, including the offices of the company, are located there, besides homes of the company's officials and employees, stores, railway station, townsite office, etc., and a postoffice has just been established. The company has four artesian wells from 370 to 430 feet deep, yielding a flow of from 185 to 275 gallons per minute. This tract is located at the headwaters of the St. John's River, and consists largely of prairie and muck land, such as is found in the Everglades section. Just south of this tract there is a grapefruit and orange grove, which has been successfully operated for 11 years. Chemical analysis shows that this soil is rich in nitrogen, carrying as high as 3 per cent.

It is expected that this tract will soon be ready to be placed on the market, and the selling will be done by the Security Underwriters' Corporation, whose headquarters are located at 200 Scarritt Building, Kansas City, Mo. The officers of the Fellsmere Farms Co., owner and developer of this tract, are Oscar T. Crosby, Warrenton, Va., president; E. Nelson Fell, Warrenton, vice-president; Ernest H. Every, Sebastian, Fla., manager.

INCREASING DEMAND FOR SOUTHERN LUMBER.

In 1880 the 14 Southern States cut 3,410,294,000 feet, or 18.8 per cent., of the 18,087,356,000 feet cut in the whole country. In 1900 the South's cut, 13,699,107,000 feet, was 39.1 per cent. of the country's cut, 34,780,513,000 feet. In 1909 the South cut 52.9 per cent. of the country's total output, or 23,572,534,000 feet, in the total of 44,509,761,000 feet, and the value of the South's cut, \$348,432,812, was 50.9 per cent. of the value of the country's cut, \$684,497,859. The cuts and values by States, including those of Missouri and Oklahoma, are shown in the following table:

	Feet.	Value.
Alabama	1,691,001,000	\$23,938,627
Arkansas	2,111,300,000	31,839,283
Florida	1,301,734,000	17,002,600
Georgia	1,342,249,000	17,100,776
Kentucky	400,712,000	18,515,544
Louisiana	3,551,918,000	50,539,064
Maryland	26,359,000	3,397,634
Mississippi	2,772,669,000	38,322,513
North Carolina	2,177,715,000	27,971,898
South Carolina	897,690,000	11,816,420
Tennessee	1,223,389,000	27,450,562
Texas	2,093,130,000	25,747,212
Virginia	2,101,716,000	28,012,274
West Virginia	1,472,942,000	26,148,157
Total	23,572,534,000	\$348,432,812
Missouri	660,159,000	\$10,441,472
Oklahoma	225,730,000	\$3,094,262
United States	44,509,761,000	\$684,497,859

The increasing demand upon the South for lumber indicated in these figures is emphasized in the accompanying tables comparing the cut in the South and in the whole country by separate woods and showing the cuts and values of separate woods in individual Southern States:

	Feet.	Value.
South. United States.		
Yellow pine	15,860,981,000	16,277,185,000
Douglas fir	4,856,378,000	
White pine	302,715,000	3,900,034,000
Hemlock	447,804,000	3,051,399,000
Spruce	372,102,000	1,748,547,000
Western pine		1,499,965,000
Cypress	918,358,000	95,635,000
Redwood	521,630,000	
Cedar	31,306,000	346,008,000
Larch		264,022,000
Tamarack		157,192,000
White fir		89,318,000
Sugar pine		97,191,000
Balsam fir	1,614,000	108,702,000
Lodgepole pine		23,733,000
Total	37,305,000	\$931,986
Missouri		2,984,000
United States	346,008,000	\$6,901,949

	Feet.	Value.
South. United States.		
Yellow pine	15,860,981,000	16,277,185,000
Douglas fir	4,856,378,000	
White pine	302,715,000	3,900,034,000
Hemlock	447,804,000	3,051,399,000
Spruce	372,102,000	1,748,547,000
Western pine		1,499,965,000
Cypress	918,358,000	95,635,000
Redwood	521,630,000	
Cedar	31,306,000	346,008,000
Larch		264,022,000
Tamarack		157,192,000
White fir		89,318,000
Sugar pine		97,191,000
Balsam fir	1,614,000	108,702,000
Lodgepole pine		23,733,000
Total	37,305,000	\$931,986
Missouri		2,984,000
United States	346,008,000	\$6,901,949

	Feet.	Value.
South. United States.		
Oak	2,871,944,000	4,414,457,000
Maple	111,176,000	1,106,604,000
Yellow poplar	763,242,000	858,500,000
Red gum	581,626,000	706,945,000
Chestnut	384,016,000	663,891,000
Beech	100,710,000	511,244,000
Birch	20,056,000	452,370,000
Basswood	71,574,000	399,151,000
Elm	45,891,000	347,456,000
Cottonwood	172,308,000	265,600,000
Ash	128,841,000	291,209,000
Hickory	215,148,000	333,929,000
Tupelo	91,165,000	96,675,000
Walnut	15,316,000	46,108,000
Sycamore	20,357,000	56,511,000
Cherry	8,628,000	24,594,000
All other	29,857,000	37,557,000
Total	23,572,534,000	44,509,761,000

	Feet.	Value.
South. United States.		
Yellow pine	1,506,863,000	\$20,267,307
Arkansas	1,313,668,000	17,287,871
Florida	1,110,340,000	14,896,413
Georgia	1,194,987,000	14,650,541
Kentucky	38,419,000	533,256
Louisiana	2,736,756,000	34,127,347
Maryland	97,598,000	1,229,725
Mississippi	2,114,706,000	28,232,472
North Carolina	1,575,186,000	19,170,014
South Carolina	797,094,000	10,290,484
Tennessee	117,135,000	1,459,502
Texas	2,019,423,000	24,435,018
Virginia	1,221,691,000	14,330,435
West Virginia	16,615,000	23,004
Total	23,572,534,000	44,509,761,000

	Feet.	Value.
South. United States.		
White pine	31,324,000	\$420,681
Kentucky	4,606,000	70,564
Maryland	4,943,000	73,651
North Carolina	96,624,000	1,242,585
South Carolina	7,618,000	75,799
Tennessee	35,553,000	647,420
Virginia	96,061,000	1,262,342
West Virginia	25,986,000	448,258
Total	302,715,000	\$4,241,200
United States	3,900,034,000	\$70,830,131

	Yellow Popl.	Birch.
Alabama	38,324,000	\$814,385
Arkansas	4,484,000	95,420
Florida	1,268,000	33,767
Georgia	21,472,000	403,674
Kentucky	149,808,000	4,175,149
Louisiana	886,000	24,099
Maryland	5,328,000	106,880
Mississippi	25,833,000	607,334
North Carolina	74,285,000	1,410,672
South Carolina	7,644,000	164,193
Tennessee	164,826,000	4,367,889
Virginia	114,503,000	2,622,119
West Virginia	154,581,000	4,173,687
Total	763,242,000	\$18,999,288
Missouri	1,791,000	\$34,947
United States	858,500,000	\$21,799,854
	Chestnut.	
Alabama	1,125,000	\$16,808
Arkansas	78,000	1,008
Florida	67,000	623
Georgia	36,953,000	451,196
Kentucky	581,000	6,338
Louisiana	2,968,000	30,897
Maryland	680,000	6,052
Mississippi	880,000	9,495
North Carolina	15,000	165
South Carolina	1,000	165
Tennessee	18,341,000	201,751
Texas	62,000	682
Virginia	2,238,000	25,357
West Virginia	36,722,000	399,903
	Tupelo.	
Alabama	100,710,000	\$1,150,331
Missouri	325,000	\$3,250
United States	511,244,000	\$6,773,006
	Basswood.	
Alabama	564,000	\$11,241
Arkansas	665,000	13,271
Florida	88,000	1,322
Georgia	10,056,000	182,111
Kentucky	2,386,000	30,881
Louisiana	591,000	10,863
Maryland	6,387,000	105,833
Mississippi	11,463,000	221,000
North Carolina	97,000	1,746
South Carolina	1,000	1,000
Tennessee	21,000	333
Texas	97,000	1,746
Virginia	9,658,000	176,482
West Virginia	29,679,000	595,658
	Walnut.	
Alabama	71,574,000	\$1,357,591
Missouri	1,090,000	\$18,105
Oklahoma	2,000	\$233
United States	339,151,000	\$7,781,563
	Elm.	
Alabama	1,082,000	\$19,346
Arkansas	13,056,000	194,796
Florida	3,000	2,767
Georgia	10,130,000	131,082
Kentucky	1,341,000	18,653
Louisiana	97,000	12,954
Maryland	6,090,000	91,654
Mississippi	404,000	9,425
North Carolina	19,000	372
Tennessee	10,688,000	144,601
Texas	703,000	12,056
Virginia	244,000	3,177
West Virginia	881,000	12,387
	Cottonwood.	
Alabama	45,891,000	\$653,238
Missouri	27,913,000	\$423,719
Oklahoma	2,140,000	\$27,948
United States	347,456,000	\$6,088,098
	Cottonwood.	
Alabama	1,269,000	\$19,822
Arkansas	54,507,000	1,035,088
Florida	367,000	5,526
Georgia	2,260,000	34,940
Kentucky	1,537,000	25,530
Louisiana	47,509,000	854,687
Mississippi	46,222,000	920,280
North Carolina	309,000	3,822
South Carolina	2,048,000	32,686
Tennessee	12,380,000	273,227
Texas	3,354,000	63,290
Virginia	254,000	2,540
West Virginia	352,000	5,403
	Cottonwood.	
Alabama	172,308,000	\$3,276,841
Missouri	17,987,000	\$26,834
Oklahoma	9,585,000	\$133,615
United States	265,600,000	\$4,794,424
	Ash.	
Alabama	3,387,000	\$84,675
Arkansas	33,212,000	805,712
Florida	282,000	7,608
Georgia	3,106,000	73,799
Kentucky	14,958,000	326,832
Louisiana	11,200,000	243,600
Maryland		

States, included buckeye, locust, persimmon, willow, butternut, dogwood, cucumber, shittim, silver bell, alder, hackberry, bois d'arc, apple, magnolia, olive, laurel, sassafras, coffee wood, myrtle, mulberry, mahogany and teak. Of 31 native woods, classified by States, 23 were cut in the South. The South's production of soft-wood lumber was 17,940,709,000 feet, or 52.9 per cent. of the total, 33,896,959,000 feet in the country, and of hardwood lumber 5,631,825,000 feet, or 53 per cent. of total, 10,612,802,000 feet in the country.

The South cut 15,860,981,000 feet, or 97.4 per cent., of the 16,277,185,000 feet of yellow pine cut in the country; 918,388,000 feet, or 96 per cent., of the 955,635,000 feet of cypress; 91,105,000 feet, or 94.3 per cent., of the 96,676,000 feet of tupelo; 763,242,000 feet, or 88.8 per cent., of the 858,500,000 feet of poplar; 581,626,000 feet, or 80.8 per cent., of the 706,945,000 feet of red gum; 2,871,944,000 feet of oak; 172,308,000 feet, or 64.8 per cent., of the 265,600,000 feet of cottonwood; 215,148,000 feet, or 64.6 per cent., of the 333,929,000 feet of hickory; 384,016,000 feet, or 57.8 per cent., of the 663,891,000 feet of chestnut, and 29,857,000 feet, or 79.4 per cent., of 37,557,000 feet of all other woods.

In the cut of leading woods, Arkansas ranked first among the States of the country in red gum, cottonwood and ash; Louisiana in yellow pine, cypress and tupelo; Tennessee in oak, yellow poplar and hickory, and West Virginia in chestnut and hickory.

In the Southern States yellow pine was the principal kind of wood cut in Alabama, Arkansas, Florida, Georgia, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Texas and Virginia; oak in Kentucky, Tennessee and West Virginia.

Of the total value, \$348,432,812, of the Southern cut, yellow pine represented \$200,943,399; oak, \$56,361,068; yellow poplar, \$18,900,268; cypress, \$18,947,489; red gum, \$7,724,422; hickory, \$6,824,503; hemlock, \$6,294,157; spruce, \$5,972,307; chestnut, \$5,864,882; white pine, \$4,241,200; cottonwood, \$3,276,841; ash, \$3,203,323; maple, \$1,471,385; basswood, \$1,357,591; beech, \$1,150,331; tupelo, \$1,078,552; cedar, \$931,986; elm, \$653,338; walnut, \$545,417; birch, \$316,371; cherry, \$295,148; sycamore, \$274,386; balsam fir, \$22,806, and all other, \$1,682,642.

Southern Hardware Jobbers.

The Southern Hardware Jobbers' Association in convention last week at San Antonio, Tex., decided to meet next year at Nashville, Tenn., and elected Messrs. C. H. Ireland of Greensboro, N. C., president; W. A. Parker of Atlanta, Ga.; W. N. Pitkin of New Orleans, vice-presidents; J. A. Summers of Johnson City, Tenn., and Frank Dunlop of Fort Smith, Ark., members of the executive committee. Mr. John Donnan of Richmond, Va., was re-elected secretary. The American Hardware Manufacturers' Association will meet next year at Nashville.

For a Woodworking Factory.

Mr. L. L. Dupont of Dupont, Ga., writes to the MANUFACTURERS RECORD:

"To a party who will put up a veneer, crate and box factory I will give the hardwoods on 7000 acres of land, furnish site on railroad and free use of water-power nearby."

A \$100,000 Fertilizer Company.

The Carolina Coast Line Co. of Newbern has been chartered with \$100,000 capital stock by J. Couacil Brown, James A. Bryan, George H. Roberts and C. W. Munger.



COMMERCIAL NATIONAL BANK BUILDING AT CHARLOTTE.

This view represents building as planned; structure to be 12 stories high, 35x150 feet; marble and terra-cotta; fireproof construction; direct steam heat; electric lighting; three traction elevators; cost, without mechanical equipment, about \$250,000; architects, Mowbray & Uffinger of New York; bank will open bids for construction about May 8.

MECHANICAL ENGINEERS.

Interesting Program for the American Society's Convention.

The application of mechanical engineering to the field of cement manufacture will be one of the important questions considered by the American Society of Mechanical Engineers at its annual spring meeting at Pittsburgh, Pa., May 30-June 2. Papers will be presented covering different phases of the subject, among them that on Edison roll crushers, by W. H. Mason, superintendent of the Edison Portland Cement Co. at Stewartsville, N. J., and some problems of the cement industry, by Walter S. Landis, associate professor of metallurgy at Lehigh University. There will be a full discussion by the many interested in cement manufacture who are expected to be present. Other important topics will be turbo-compressors and forging presses.

In addition to papers already mentioned, the professional sessions of the convention will deal with machine-shop practice, with papers on the assembling of small interchangeable parts, by John Calder, manager of the Remington Typewriter Works of Ilion, N. Y.; the process of assembling small and intricate parts, by Malcolm Ellis of the Ellis Adding-Typewriter Co. of Newark, N. J., and the design of milling cutters and their efficiency, by A. L. De Leeuw, mechanical engineer of the Cincinnati Milling Machine Co. of Cincinnati, O.; also with steel-works practice, with papers on the commercial application of

the turbine turbo-compressor, by R. H. Rice of the General Electric Co., West Lynn, Mass., and upon hydraulic forging presses and blowing engines, and with miscellaneous topics, including papers on stresses in tubes, by Reid T. Stewart, professor of mechanical engineering of the University of Pittsburgh, the purchase of coal on the heat-unit basis, by Dwight T. Randall, engineer in charge of the fuel engineering department of Arthur T. Little, Inc., Boston, Mass.; energy and pressure drop in compound steam engines, by F. E. Cardullo of the department of mechanical engineering of the New Hampshire College of Agriculture and the Mechanic Arts, and a pressure-recording indicator for punching machinery, by Gardner C. Anthony, dean of the engineering school of Tufts College. There will also be a session on gas power, with papers to be announced.

There will also be an opportunity on the afternoons of May 30 and 31 for inspection of the Foundry & Machine Exhibition Co.'s exhibit, which will be in progress in the exhibition building. In the afternoon of May 31 a trip to the works of the Universal Portland Cement Co. will be made, by invitation of President E. M. Hagar of the company, with a stop at East Pittsburgh to allow those who desire to visit the plants of the Westinghouse Electric & Manufacturing Co. and the Westinghouse Machine Co. The professional session of June 1 will deal with miscellaneous topics and will be as brief as possible, in order to leave ample time for an excursion up

the Monongahela River, including a visit to the National Tube Co.'s works at McKeesport. An inspection trip to the Mesta Machine Co.'s works at Homestead, Pa., is planned for the afternoon of June 2.

Foundry and Machine Shop Exhibits.

In the week of May 23-June 2 there will be held at Pittsburgh, Pa., the annual meeting of the American Society of Mechanical Engineers, the American Foundrymen's Association, the American Brass Foundrymen's Association and the Associated Foundry Foremen. These meetings have been made the occasion for a foundry and machine shop exhibition, and among the exhibits for which space has already been taken are adding machines, blowers and fans, cars and industrial railway systems, carborundum wheels, coke, fire-brick and fire-clay cupola blocks, core machines, crucibles, retorts, etc.; electric traveling cranes, air compressors, electric controllers, conveying machinery, drill presses, drill-grinding machinery, electroplating machinery, emery wheels, factory construction materials, ferro-alloys, flasks, melting furnaces, foundry supplies and equipment, gear-cutting machines, gear hobs, disc grinders, automatic grinding and polishing machinery, air and electric hoists, automatic lathes, turret lathes, lifting magnets, molding machines, motors, non-ferrous metals, pattern-making machinery, pig-iron, pneumatic and electric riveters, sand, sand-blasting machinery, sand-mixing machinery, pneumatic tools, toll-grinding machinery, tumbling mills, autogenous welding and cutting devices, thermit welding devices, wire straighteners and cutters, woodworking machinery and wheelbarrows.

Gas and Electric Men.

The Southwestern Gas and Electric Association at its convention last week at Houston, Tex., elected Messrs. Joe E. Carroll, Beaumont Ice, Light & Refrigerating Co., president; E. T. Moore, Dallas Consolidated Electric Co.; Dan G. Fisher, Dallas (Tex.) Traction Co.; C. H. Dunbar, Houston Gas Co., vice-presidents; Dan G. Fisher, secretary, and A. E. Judge, Tyler Electric Co., treasurer.

South Carolina Fisheries.

The value of South Carolina fisheries products in 1908 was \$288,000, of which \$137,000 represented oysters, \$41,000 shad, \$22,000 sea bass, \$19,000 mullet, \$19,000 shrimp and pawn, \$17,000 whiting, \$8700 squalene, \$6300 hard clams.

Savannah Factories.

The capital invested in factories in 1909 in Savannah, Ga., according to the Census Bureau, was \$9,334,000, an increase over 1904 of \$1,334,000, equal to 17 per cent., and the value of products was \$6,734,000, an increase of \$394,000, equal to 6 per cent.

Kentucky Fisheries.

Products of Kentucky fisheries in 1908 had a value of \$110,000. Catfish were the principal product, with a value of \$26,000, with buffalo fish second, \$21,000, and German carp third, \$18,000. The mussel fisheries, including shells, pearls and slugs, were valued at \$20,000.

Intending settlers in the South should supply themselves with a copy of the seventh annual report of Commissioner E. J. Watson of the South Carolina Department of Agriculture, Commerce and Immigration. The publication is full of interesting facts about developments in the farming, mineral, timber, manufacturing and commercial fields in the State, an epitome of what may still be accomplished there.

THE SPONGE INDUSTRY OF TARPO SPRINGS, FLORIDA.



TYPICAL SPONGE FISHING CREW.



PREPARING FOR DIVE.



AS THE DIVER DISAPPEARS.



AS THE DIVER REAPPEARS.

A few years ago Greek sponge fishers, attracted by the large supply of sponges found in the Gulf a few miles from Tarpon Springs, began the development of that industry. This point has now become the center of the sponge-fishing industry of the country. Unlike sponge fishing at Key West, where the sponges are pulled up by tonging, something on the order of tonging for oysters, the sponge fishing in the Tarpon section is all done by divers.

There are now about 1800 Greeks working in the Tarpon sponge-fishing industry, all of whom were formerly engaged in sponge fishing in the Mediterranean.

At the Tarpon Springs sponge ground the divers go down from 60 to 100 feet. In the Mediterranean, where these men formerly worked, they had to go down about 240 feet. Each fishing boat is equipped with two divers and their helpers. Each diver has two men who pump air down to him and watch his signals. He works about two hours and then comes up and rests and the other diver goes down.

The sponges are cut loose from the bottom with sharp knives, hauled up on board, cleaned and dried, and are assorted according to size and quality. Twice each week public sales are held at the Sponge Exchange. The sponges are taken out of the warehouses on these days and arranged in piles along the platform. The buyers examine each pile and make secret written bids for those they want. No buyer is supposed to have any information as to what his competitor is bidding. The highest bid for each pile, if satisfactory to the seller, is accepted. The sellers, however, have the right to reject all bids, but the buyers after having put in their bids cannot recall them. The sale of sponges averages about \$750,000 a year, and Florida has the monopoly in this country in sponge production.

The Greek colony, developed since the beginning of this industry about six years ago, numbers about 2500. Many of the men are unmarried, while many of the married ones have not yet brought their families over. Most of the members of the community are said to be devoted members of the Greek Church, very faithful in their religious duties, honest and upright. They are reported as peaceable and law-abiding, and the moral tone of the community is said to be of the best.

The accompanying kodak pictures, taken during a recent visit to Tarpon Springs, show the foreign character of the men engaged and the method of putting on the diving suits, and the diver after he is overboard and ready to go down.

HOUSTON'S SKYLINE RISING.

Important Developments in the Past Eighteen Months.

[Special Cor. Manufacturers Record.]

Houston, Tex., April 28.

Within the past 18 months Houston has entered an unprecedented era of building and development. Building construction and general industrial activity have taken strides that have set a new record for city building and expansion. New factories, industries, commercial houses and other business institutions are entering, bringing added wealth and increased population to the city.

A step taken the first of the year by the people of Houston in voting \$1,250,000 bonds, to be used with a like amount appropriated by the Congress for deepening

and straightening the Houston ship channel, marked the shaping of the destiny of Houston. With the great inland waterway from Houston to the Gulf of Mexico, 48 miles in length, deepened, and the shipping of the world touching at the port of Houston, Houston will be unsurpassed by any port on the Southern seaboard. The voting of the waterway bonds was a vital issue in Houston. The Chamber of Commerce, the city administration and every progressive citizen of the city and county were behind the movement, and the election returned a nearly unanimous vote.

A great factor in the development of Houston is the Chamber of Commerce. Since 1840 Houston has had a business organization known as the Business League. A year and a half ago in the regular election the name was changed to

that of the Chamber of Commerce, and a new regime took hold. Adolph Boldt was elected secretary, and from the time of his succession to office the organization took on new life, quickly expanding into the representative organization it is today under the present president, A. S. Cleveland. Under the new regime the Houston Traffic Bureau was affiliated with the Chamber of Commerce, becoming one of the departments. The Industrial Bureau, the Convention Bureau and the Publicity Bureau were added, and the work of city building departmentalized and placed on a business basis. When the present administration took hold the old Business League numbered about 400 members. Today 1200 names of men identified with every leading business interest of the city appear on the rolls. A year and a half

ago the Chamber of Commerce began existence on an income of \$400 per month. Today the revenue from membership alone totals over \$1500 per month.

Within the last 18 months the city has entered a great building era, with the result that the even skyline of two years ago is severely broken, 27 buildings of from 6 to 16 stories jutting their domes into the sky in an irregular line throughout the expanding business section.

Principal in the building construction in Houston in the past 18 months are the following prominent buildings: Carter office building, 16 stories; Union National Bank, 10 stories; Scanlan office building, 11 stories; Bender Hotel, 10 stories; Chronicle building, 10 stories; the Texas Company, general headquarters building, 10 stories; Southern Pacific general offices

building, nine stories; Bristol Hotel annex, nine stories; First National Bank, eight stories; Rossonian apartments, eight stories, said to be the finest in the South; Scanlan warehouse, six stories; Milby Hotel, six stories; Southwestern Telephone Co. building, six stories, and the Bering-Cortes building of six stories.

In addition, within that period buildings not classed among the skyscrapers were erected as follows: New municipal auditorium of steel and concrete at a cost of \$400,000, paid for out of the general revenues of the city, seats 7000 persons and can accommodate 10,000; the Harris county courthouse, recently completed at a cost of \$500,000; the Majestic Theater; South Texas National Bank, all marble, exclusively for banking purposes; the new station of the Houston Belt & Terminal Co., erected at a cost of over \$1,000,000, and the Southern Pacific Hospital, costing over \$1,000,000.

A great institution, work on the erection of which has just begun, is the Rice Institute, to enter the field of education with a foundation of \$8,000,000. The new \$400,000 Federal building is nearing completion, while the beautiful First Methodist Church, just completed, gives Houston her sixty-fourth church edifice.

A movement which has been on for years, looking toward the bringing into closer communication of the south and north ends of the city, was brought to a successful conclusion January 10 when \$500,000 bonds were voted for the construction of a steel and concrete viaduct at the foot of Main street over Buffalo and White Oak bayous. This structure will be over 400 feet in length and will span the two bayous and the network of railroad tracks of a majority of the 17 railroads entering the city. Plans for this structure are nearly completed in the office of the consulting engineer and work will be started this year.

Recently the Chamber of Commerce and the School Board of Houston co-operated in a campaign for an election on the proposed issue of \$500,000 bonds for school purposes. Petitions were circulated calling on the Mayor to order the election, and the Mayor and Commissioners have responded, the date for the special election being set for May 23.

Another municipal improvement in Houston, completed within the year, is the Austin-street storm sewer. This giant tube of from 5 feet, widening to 12 feet at the outlet, traverses the center of the main portion of the city, and drains within an hour sections heretofore inundated for days following a torrential rain.

Within the year the city of Houston has started work on the construction of the city slips at the turning basin in the ship channel. These slips will be connected with the extensive terminals now being put in at the turning basin. The International & Great Northern Railroad is constructing excellent shipping and docking facilities at Constitution Point on the channel, all in preparation for the dredging and straightening of this inland waterway.

Construction work on the Galveston-Houston Interurban Railway is going on rapidly, and the track and complete electrification will be complete before the Galveston Causeway, over which it will cross to Galveston Island, is finished.

Houston, by her location, natural advantages and competitive rail and water rates, is a lumber center of the South. Forty-six wholesale lumber companies, with an annual aggregate business of \$37,000,000, operate in Houston.

Harris county has 300 miles of shelled highways, all converging at Houston, the delight of the autoist and farmer. The

county is spanned in either length by these boulevards, which are constructed with native material. The roads are built with oyster and clam shell taken from almost unlimited deposits. Within 50 miles of Houston, in Trinity and Galveston bays, it is estimated there is enough shell to pave 3,000,000 city blocks. There is said to be a deposit of 750,000,000 cubic yards of shell in both bays. The Houston Chamber of Commerce fostered and aided the organization of the Gulf Coast Good Roads Association, formed for the improvement of highways over the Gulf Coast country. The activities of this association will add to the already great mileage of improved highways in Harris county.

CHARLES E. TRIMBLE.

San Antonio's Live Wire.

Chamber of Commerce,

San Antonio, Tex., April 14.

Editor Manufacturers Record:

About three and a half years ago the Chamber of Commerce, then known as the Business Men's Club, began a campaign for more hotels. San Antonio was at that time becoming a great winter tourist resort, and the necessity for more hotel accommodations was apparent to all. For a few fruitless months efforts were made to interest outside capital, and then the leaders of the Chamber of Commerce realized and pointed out that it is true of cities as of individuals, and the Lord helps those that help themselves, and that San Antonio men and San Antonio capital must rise up to meet this crisis.

Practicing the faith that he preached, Mr. L. J. Hart, one of the ex-presidents of the Chamber of Commerce and a director, proceeded to organize the San Antonio Hotel Co., that has since built the magnificent Gunter Hotel. Spurred by the example of Mr. Hart, Mr. B. L. Naylor, since dead, and Mr. A. H. Jones proceeded to build the St. Anthony Hotel. This hotel, immediately when the first part was completed, met with such success that an annex of greater capacity was erected. Following this lead, smaller hotel and apartment-houses were built all over the city, until today San Antonio has extensive modern and luxurious hotel accommodations.

The results of this activity have been felt throughout the business organism of San Antonio. Tourist traffic leaped at once to splendid dimensions, due primarily to persistent advertising carried on for the municipality by an auxiliary of the Chamber of Commerce known as the Publicity League. This organization, formerly merely the advertising committee of the Chamber of Commerce, was extended and enlarged and made an ally independent in the handling of its own finances, but under the jurisdiction of the parent body. It has raised and disbursed in the past two years \$50,000. With its activities a great deal of advertising has been done by the hotels themselves, by the great land companies whose headquarters are in San Antonio and by the railroads centering here.

As a result of this advertising the tourist traffic, as estimated by railroad reports, amounts to 25,000 to 30,000 a winter, and they leave at least \$10,000,000 in San Antonio each winter. This work of the Chamber of Commerce and Publicity League has been met with wonderful appreciation in San Antonio and all over the country. No other adventure in municipal advertising has been more persistently followed up or has met with more successful results.

During the coming year the Publicity League plans to institute a campaign for more factories in San Antonio. In connection with its other efforts it has already succeeded in bringing a number of impor-

tant industries to the city, and it is preparing to extend the scope of this effort not only by advertising, but by a system of follow up and traveling salesmen who will reach the factory men directly, and like any other salesman, land his man.

The great hotel and tourist traffic naturally expanded into another line of endeavor, the securing of conventions. In this work the convention bureau of the Chamber of Commerce has been singularly successful. It has brought from 25 to 30 conventions a year to the city, some of them national in scope, and has handled them in such a way as to win through these visitors a host of friends whose words-of-mouth praise is an advertisement of inestimable value to the city.

The great Transmississippi Commercial Congress met in San Antonio last fall; the Cattle Raisers' Association, the Lumbermen's convention and dozens of others have met here in the past two years, and a number of them have been so delighted that they have adopted a policy of coming back to San Antonio periodically every two or three years. This has developed a clear-cut convention business which has proved a source of profit and attraction to the city.

In the matter of general entertainment also the Chamber of Commerce of San Antonio has acquitted itself with great credit. In the past three years it has entertained distinguished persons, such as President Taft, Colonel Roosevelt, Mr. E. H. Harriman, as well as several foreign ambassadors, army officers, delegates from visiting chambers of commerce and the like. This phase of activity of the civic body is highly important. Coupled with it has gone a series of banquets for the purpose of uniting and holding together in bonds of friendship and harmony the business men of the city. These banquets have been arranged through the various allies of the Chamber of Commerce so as to reach all the groups of business men. Once a year an effort is made to bring all the groups into one great banquet.

Among the new industries established in San Antonio may be mentioned a cold storage establishment, started with a \$100,000 plant, and at the end of a year's operation it met with such success that an additional plant costing \$100,000 was constructed. Several new food-product factories, utilizing the many vegetable products of this section, have been established, and in general there has been an extension of all the existing factories.

The Chamber of Commerce plans the making of a quasi public organization to be known as the San Antonio Factory Development Co., which shall establish a factory city at a convenient place near the city limits, so situated that the smoke and other nuisances will not blow into the city. They contemplate furnishing free sites to all bona-fide factories wishing to locate here, and they expect to work out a plan of credits to assist the factories moving here from other places.

San Antonio business men have accumulated their capital by hard work. They have demonstrated their ability to handle it, and will continue to do so. They are, however, not averse to making good investments, and any man who can come to San Antonio and demonstrate that he has had the experience in managing a factory of almost any kind and can show that he has some money of his own to invest in it, is prepared to devote his time and energies and his money to the management of the enterprise, is sure of a respectful hearing from the San Antonio business men, and if he can demonstrate his proposition he can get financial assistance.

San Antonio needs and will build in the next 12 months a big coliseum for the housing of big conventions and spectacular

shows. Each spring there takes place in San Antonio a pageant of flowers known as the Battle of Flowers, which is a great patriotic celebration commemorating the deathless heroism of the Alamo and the splendid victory at San Jacinto, which won Texas independence. This fete is given by the San Antonio Spring Carnival Association, which, like the Publicity League, is an ally of the Chamber of Commerce, and has its offices at the Chamber of Commerce building. The secretary of the Chamber of Commerce is also secretary of the Publicity League and the Carnival Association, and so the efforts of these bodies are unified. This festival of flowers has in the past few years grown in scope and importance and beauty until it compares with the Mardi Gras of New Orleans and draws visitors from all over the United States into San Antonio.

Recently San Antonio has been fortunate in being designated as the point of mobilization of some 12,000 of the troops of the United States Army. In connection with the soldiery San Antonio has also, by reason of its delightful climate and freedom from high winds, been chosen as the place for the aviation experiments conducted by the United States Army. Lieutenant B. D. Foulois, assisted by Parmelee, the celebrated aviator in the employ of the Wrights, whose machines the Government use, have made many spectacular flights in and about San Antonio. Now news comes that the Wrights themselves, accompanied by some of the greatest aviators in America, will shortly be here and will establish a school of instruction in aviation for the benefit of a number of army officers.

These are but a few of the features that go to the building up of what is destined to be the greatest city in the whole Southwest. Coupled with these is the foundation for a great commercial development. San Antonio has for years been a distributing point for this great Southwest Texas, a territory larger than the State of Ohio. The wholesale houses do an immense business, a business that has grown to these great proportions with only about a 12 per cent. development of the agricultural lands in this territory, and as these lands are being rapidly colonized the volume of the wholesale business is sure of a great increase.

San Antonio, by reason of its charms as a city and its wonderful attraction for visitors, has very naturally developed an immense retail business. Partly as a result of this attractiveness in shopping and as a tourist center great educational institutions have grown up in San Antonio, and students come here from all over the Southwest and the Republic of Mexico for their training.

No event better reflects the commercial soundness of San Antonio in its growth than the organization lately of a \$500,000 construction company to build a railroad from this city to the Lower Rio Grande Valley in the vicinity of Brownsville. The details of this have already recently been set forth in the MANUFACTURERS RECORD, and it is not necessary to repeat them.

JOHN B. CARRINGTON, Secretary.

Utilizing Angora Goats.

Mr. Horace A. Field, secretary and general manager of the North Georgia Marble Co., Tioga, Ga., writes to the MANUFACTURERS RECORD:

"You may be interested to know that an article in your paper, some time ago, in regard to stocking waste land with Angora goats has borne fruit. This company has just purchased a carload of the finest strain of thoroughbred Angora goats, and proposes to increase the number if this lot does as well as we hope it will."

A \$600,000 GRANITE COMPANY.**Possibly Vast Scope of Georgia Capitalists' Plans.**

[Special Cor. Manufacturers Record.]

Augusta, Ga., May 1.

One of the most important efforts to develop the granite industry of the State is now being made on the part of local capitalists. More than 200 acres of the finest granite lands in the State are either owned outright or are under lease to the corporation now petitioning for charter, which will secure its papers of incorporation on the 14th inst. The concern will be known as the American Granite Co. and will have a capital stock of \$600,000, \$250,000 of which has already been paid in. An authorized capital of \$1,000,000 is asked for in the petition.

The petitioners include Jacob Phinizy, president of the Georgia Railroad, president of the Georgia Railroad Bank, and known as one of the richest men in the State; Charles F. McKenzie, head of the contracting concern of J. H. McKenzie's Sons and other enterprises; W. F. Bowe, one of the best-known figures in the granite trade of the State and South. Others who are also named in the petition for charter are B. C. Banks and D. C. Talbott, who represent Virginia interests.

The property which is owned by the company lies principally near Lithonia, where more than a hundred acres are owned outright, while a large acreage is held either under long lease or option. The other property is held at Sparta. The character of the formation at Lithonia is one of the most remarkable in the United States, if not in the world. Expert engineers who have long worked nothing else but stone declare that they have never seen anything its equal. The quarry has been worked in an indifferent sort of way for the past 20-odd years. In that time not enough to make it noticeable has been taken from it, though some notable buildings have been constructed from it. The feature of the granite is that it will split when seamed as straight as a board will for distances sometimes as long as 300 feet. The stone is of the character most in use in the United States for paving and building purposes, being especially adapted to the rough and half smooth surface work used so much in the construction of modern buildings. It is the opinion of experts that this stone can be quarried and placed aboard cars cheaper than any other quarry in the country. The Georgia Railroad runs right by the property, so that it is a question of loading by gravity and not by lifting as is the case of so many mines.

In the case of the Sparta quarries this stone is of the very highest type found in the United States. It is susceptible of a very high polish, mirror-like in its appearance, making it highly desirable in inside or outside work, being unusually adaptable for monumental purposes.

The need of organizing the various quarries of this section into one solid compact organization has long been looked upon as a necessity if they were to continue to do business. The concern now in process of organization will have ample capital to take care of any contracts that may offer, have the time and means to go out and solicit the business, and in general to conserve the best interests of the whole industry. It is expected that other quarries will come in later. For the past two or three years it has been out of the question to get crushed stone for ordinary building purposes except after weeks of waiting. The first thing the new concern will do is to put in a crushing plant at Lithonia, where as much as

hundred tons can be turned out each day if there is demand for it.

It is known that various rail lines of the South have not ballasted track so far because of the high price stone was charged for, and what is more the very indifferent way it was doled out. The consolidation of the quarries in question and the providing of ample capital to handle any reasonable volume of business offering is certain to be the means of causing many of the railroads that have been holding back in the matter of ballasting to get active at once. The installation of a thoroughly modern plant, with powerful machinery, will be the means of lowering the cost of production to the range where it will be possible to make the price so attractive as to make ballasting desirable from every standpoint.

The officers of the company will probably be as follows: President, Charles F. McKenzie; vice-president, William F. Bowe; treasurer, Jacob S. Phinizy. The secretary's place is now under advisement. H. D. Calloway, B. C. Banks and D. C. Talbott, besides the officers, will be included in the directorate. It is the intention of the company to maintain offices in Atlanta, Chicago, Cincinnati and Indianapolis.

R. M. MARTIN.

Electricity for Raleigh.

[Special Cor. Manufacturers Record.]

Raleigh, N. C., May 1.

President Charles E. Johnson of the Carolina Power & Light Co. is very much pleased at the rapid work which is being done on the Blewitt's Falls hydroelectric plant and on the survey for the transmission line to Raleigh and for the lines to lead from Raleigh to points where the power is to be furnished from the central station here. He says that the current will be on from Blewitt's Falls not later than January 1 next. The same form of steel tower will be used for the line to Raleigh as that adopted for the line from Buckhorn Falls to this city, on which there has not been a particle of trouble in over two years. Work will begin this month on the great transformer station and storage house in the western suburbs of Raleigh.

The Carolina Power & Light Co., which took over some time ago the gas plant at Durham and is operating it after making many improvements, has bought the gas plant at Raleigh, formerly owned and operated by the Standard Gas & Electric Co. The stockholders were all Raleigh people. In the past four months a large gas-holder has been built at this plant, but a great many other improvements are needed and will be made at once by the strong company which is now the owner. There will be much extension of mains, which is greatly needed, and the new development means a vast deal for Raleigh and its suburbs.

Your correspondent has just returned from a visit to Concord. A great many people are going to Concord to see the storage battery electric cars, the first ones in the South.

Much building of new factories to make furniture is in progress at High Point and Thomasville. The steel towers, which are of the obelisk pattern, are put up practically all the way between Salisbury and Durham by the Southern Power Company. West of Salisbury there are many power transmission wires, and some of them are on low wood poles, which will, of course, have to be replaced with steel ones.

At Thomasville water-mains are being laid, these extending all over that thriving town and also to the Baptist orphanage in its suburbs.

FRED. A. OLDS.

TO REFINE COTTONSEED OIL.**Swift & Co. Completing Plant Near New Orleans.**

[Special Cor. Manufacturers Record.]

Swift & Co., the Chicago packers, are completing a cottonseed-oil refinery at Harvey, opposite New Orleans, which will have a capacity of 640 barrels daily. They are export and import mills of 320 barrels capacity each. The buildings are on the river front, located on a tract of 37 acres, 22 acres of which were bought a year ago and 15 acres this spring. The buildings which are nearing completion include an oil refinery, 115x52 feet, brick and concrete construction, fireproof throughout, part of which is four and the other three stories in height; the packing and shipping building, 128x61, two stories, mill construction; cooper shop, two stories, 64x64, mill construction, heavy joist timbers, first floor of concrete; boiler and engine room, 79x40, wood post, with galvanized sides and roof. George J. Glover, New Orleans, has the entire contract for construction.

The plant will be ready for operation about the middle of June, and will employ from 700 to 1000 hands.

Swift & Co. are putting in all their machinery and electrical work. Equipment includes Babcock & Wilcox boilers, 900 horse-power; 50-ton ice machine from an Eastern branch; Chuse engine from Chuse Engine & Machinery Co., Mattoon, Ill.; General Electric Co. generator, 75 kilowatts. The present improvement represents an expenditure of at least \$250,000.

A report has been circulated in New Orleans that this development is merely the beginning of a much more extensive plant to be established here in the course of time. These reports included the erection of a large refinery and the establishment of a packing-house plant here. No confirmation of this report can be secured here, the local representatives of Swift & Co. stating that the present cottonseed-oil mill is the only development contemplated at this time.

ALBERT PHENIS.

PAVING OF CITY STREETS.**Financing the Expense Differs, But Abutting Property Generally Bears the Burden.**

Mayor W. S. Gibbes of the city of Columbia, S. C., writes the MANUFACTURERS RECORD that a recent act of the Legislature authorizes Columbia to charge one-half of the cost of paving and curbing any street against the abutting property, provided that two-thirds of the property-owners request the paving. Payment for the same may be made in instalments running from one to ten years. Concerning this information is desired as to the methods of financing such paving plans. Columbia is not empowered to issue bonds, but can give notes with the assessments against the property-owners as collateral to secure them, these payments carrying interest of 6 per cent. Under the law it is intended that these liens shall be recognized before all other claims, excepting taxes, but there is some doubt as to their taking precedence over existing mortgages, although the city's notes are valid in any event.

In the last annual message of Mayor Mahool of Baltimore there appeared considerable information upon the subject of paving in various places. A table of 19 cities shows that in eight of them all the cost of paving is paid by the abutting property-owners. These are New York, Buffalo, Louisville, Indianapolis, St. Paul, Rochester, Kansas City and Denver. In Cleveland, Cincinnati and Toledo 98 per cent. is paid by the abutting property-owners, the cities paying for 2 per cent. and street intersections. In Chicago the

property-owners pay all the cost on residence streets and from 5 to 25 per cent. of the cost on other streets. In Philadelphia, Minneapolis and Detroit the abutting property-owners pay all the cost, excepting for street intersections. In Pittsburgh they usually pay all the cost. In New Orleans the abutting property-owners pay 75 per cent. of the cost and the city pays for all intersections and 25 per cent. In Milwaukee the property-owners pay for paving up to \$3 per square yard. In Providence the city pays all.

In Baltimore there has been no settled policy as to paving. Sometimes on main thoroughfares to connect up important sections it has been done at the general expense out of the tax levy or by public loans. But not in all cases does the city bear all the cost, for on some thoroughfares one-third of the expense has been borne by the abutting property when the property-owners asked that their streets be paved. In such cases the assessment for paving becomes a lien against the property the same as taxes.

Plan to Irrigate 200,000 Acres.

Dispatchers from Del Rio, Tex., state that another important Texas irrigation plan is under consideration and that Judge D. B. Chapin of Chapin, Tex.; David R. Francis of St. Louis and others are interested. Engineers are now making the surveys and estimates, and it is probable that about \$4,000,000 will be expended for the construction of a dam across Devil's River, a water-power electrical plant generating 10,000 horsepower for transmission by electricity and other improvements. The system is being planned to irrigate 200,000 acres of land in the valleys east of Del Rio, thus increasing the value of the property from \$10 per acre to from \$200 to \$500 per acre, and thus provide homes for about 20,000 people. These lands are in Val Verde county. Referring to the report that he is interested in this proposition, Mr. Francis telegraphs the MANUFACTURERS RECORD as follows:

"Am not interested in any Devil's River (Tex.) irrigation project. Don't know that shall be. Suggestion only submitted. Don't know that will consider."

Competition for Architects.

The executive committee of the School of Mines and Metallurgy of the University of Missouri, Edward Kahlbaum, secretary, Rolla, Mo., will receive competitive drawings until May 25 for a fireproof library and assembly hall. Mr. Kahlbaum is furnishing programs governing the competition.

Wants 35,000 Barrels of Cement.

Sealed proposals for furnishing about 35,000 barrels of American Portland cement will be received until May 31 by the War Department, United States Eng'neer Office, G. D. Fitch, lieutenant-colonel of engineers, Montgomery, Ala. This is an opportunity for manufacturers to submit bids on a large contract.

Mobile Factories.

Between 1904 and 1909, according to the Census Bureau, the capital invested in factories at Mobile, Ala., increased from \$3,824,000 to \$5,250,000, or by 37 per cent.; the value of products from \$4,942,000 to \$5,429,000, or by 10 per cent.

The Maryland Steel Co., Sparrows Point, Md., has been awarded a contract to build for the United States Navy two self-propelled oil barges, each to carry 153,400 gallons of oil. Each will be 165 feet 9 inches long, with 25 feet beam and 11 feet 1 inch depth of hold. The boats will be driven by oil-burning engines.

WHAT IS YOUR TOWN DOING?

The MANUFACTURERS RECORD will be glad to receive from responsible correspondents in every town in the South brief items of news about business conditions and the opportunities for industrial enterprises. This information is desired for publication without cost of any kind to the sender, and regardless of whether the writer of the letter is a subscriber or not. The MANUFACTURERS RECORD accepts no paid matter in its reading pages. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South.

This department is open only to news facts of interest to investors, homeseekers and manufacturers. Communications of 200 or 300 words are likely to be given prompter publicity than more extended ones.

CLEVELAND'S ELECTRIC POWER.

Commercial Club,
Cleveland, Tenn., April 27.

Editor Manufacturers Record:

Probably the most important industrial event in the history of Cleveland was the beginning of the work last summer on the first dam of the Ocoee River water development at Parksville, 16 miles away, by the Eastern Tennessee Power Co., with Cleveland as its home office. The backers of this enterprise are Messrs. E. W. Clark & Co. and their associates, Messrs. Drexel & Co. of Philadelphia and Messrs. Hodenpyle, Walbridge & Co. of New York, together with Messrs. J. G. White & Co., engineers and contractors.

The first development consists of a dam in one of the gorges about 800 feet long and 110 feet high, and a power-house with a capacity for 32,000 horse-power. The second development will be some nine miles higher up the river, with a capacity of 50,000 horse-power, or a final maximum development of 82,000 horse-power. This power will be conveyed to manufacturing centers by three-phase high-tension lines, carrying 66,000 volts. This will be stepped down to 2300 or 2400 volts at various points as desired. Cleveland will be the center of this entire distribution.

Cleveland has recently organized a Commercial Club, with Mr. George L. Hardwick, proprietor of the Cleveland Woolen Mills, as president. The members of this club are not all rich men by any means, measured by the dollar mark, but they are millionaires when it comes to willingness to push the town along and make it equal to its possibilities which were placed around it by the Creator, and which are only now being developed as if by the hand of magic.

Cleveland, through the Commercial Club, offers extra inducements for manufacturing plants. Our present plants have been successful. We have abundant cheap white labor and no labor troubles.

Cleveland has cheap power, cheap raw material, cheap living. For every enterprise undertaken for the welfare of the town every man gets in and pulls his best, and it is this spirit which has fostered the

Commercial Club and will make it one of the most earnest and progressive commercial bodies to be found in the South.

D. W. DUNCAN,
Secretary.

GEORGIA TOWN'S RAPID GROWTH.

Berlin, Ga., April 26.
Editor Manufacturers Record:

Our town is a little more than one year old. Some 16 months ago where now stands a town of 500 to 600 people was just a pine forest. That has been cut. We have five large brick stores, a good strong bank and a number of small stores, making a total of 16 places of business here. We have one of the most up-to-date ginneries in the South, are now completing an artesian well for water, and have let the contract for lighting our streets. We have completed two churches, and are now getting to work on a large school, to be completed in time for our fall term of school. We have an excellent opening here for a cotton factory and a guano factory. With the new railroad that will be built from Adel to Thomasville by way of this place we will reach the thousand mark in but a short time. We had over 1000 bales of cotton ginned here the first season. There will be given to public enterprises franchises and all inducements under the jurisdiction of the city fathers. The town has a charter and a good police protection.

C. E. DAVIS.

WACO WANTS A \$400,000 HOTEL.

Business Men's Club,
Waco, Tex., April 27.

Editor Manufacturers Record:

If there ever was a city that needed a hotel it is this one. The growth of our city is becoming the wonder of the people, and for some reason or other the hotel situation is not moving along to keep up with this growth. We need a \$400,000 hotel, and it is the writer's opinion that beyond question of doubt it would be a very great paying investment. If you know of anybody that wants to figure on a proposition of this kind we would like to have you communicate with us. A hotel is only one of the many things that would be profitable in this growing city.

If any of your friends are looking for a place to invest their money or start up new enterprises in the manufacturing or jobbing line it would pay them to look into our merits. We get great pleasure and information out of your wonderful MANUFACTURERS RECORD.

E. F. DRAKE,
Secretary.

FOR BRICKMAKERS.

Board of Trade,
Bristol, Va.-Tenn., May 1.
Editor Manufacturers Record:

The Board of Trade wishes to correspond with brickmakers who can take hold of a well-equipped yard in this city and operate it to supply local demands for building material and meet orders that come in from all surrounding towns and cities. The recent death of the owner of the plant has caused it to go into the hands of the administrators, and all work has been suspended pending some disposition of the property. Millions of brick are used in this immediate section annually, and there is a splendid opportunity here for a manufacturer of this material.

F. M. RUNNELS,
Secretary.

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages 98 and 99, and under "Cities, Towns and Railroads Inviting Factories" on pages 142, 143, 144, 145, 146 and 147.

By-Products of Corn.

In a recent address at Lutherville, Md., Mr. J. C. Vincent, a member of the Baltimore Chamber of Commerce, dwelling upon the importance of the corn crop, mentioned among the by-products of corn starch used in the textile industries, in laundries, in baking powders, in candies and in paper manufacture; dextrines used in the textile industry and as sizing and in mucilage; corn syrup mixed with cane syrup and used in confectionery, in artificial honey, in jams and jellies, in chewing tobacco, in vinegar, in sauces, in canning, in tanning, in shoe polishes, blacking, ink, printers' rollers, etc.; as an addition to rubber, corn oil in the manufacture of soft soaps and soap powders, in the cottonseed-oil industry and as cup grease; oilcake used for cattle food and gluten feed for cattle.

The address of Mr. Vincent was in connection with the movement for the improvement of crops in the surrounding country, which has been carried on for several years under the auspices of the Chamber of Commerce of Baltimore.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Baltimore, Md.—City voted \$7,500,000 for paving.

Brooksville, Fla.—Town voted \$18,000 of bonds for street improvements.

Farmersville, Tex.—City voted \$10,000 bond issue for street improvement.

Linneus, Mo.—Linn county voted \$16,000 of bonds for road improvements.

Bonds to Be Voted.

Bonham, Tex.—City votes May 15 on issuing \$100,000 of street-paving bonds.

Boydton, Va.—Mecklenburg county votes June 17 on issuing \$100,000 of bonds for road improvements.

Dublin, Ga.—Laurens county contemplates road improvements; will probably issue bonds.

Germantown, Tenn.—City will vote on issuing \$3000 of bonds for street and sidewalk improvements, bridge construction, etc.

Jesup, Ga.—Wayne county will vote on issuing \$100,000 of bonds for road construction and bridging Altamaha River.

Lumberton, Va.—Town is considering issuing \$10,000 of bonds for street improvements.

Longview, Tex.—Gregg county contemplates voting on \$200,000 bond issue for grading and macadamizing roads.

Wilmington, N. C.—New Hanover county votes May 30 on issuing \$50,000 of bonds for road and bridge improvements and construction.

Contracts Awarded.

Asheville, N. C.—J. C. Arbogast awarded contract for macadamizing with bituminous binder section of Cullowhee drive; reported cost, \$10,000.

Austin, Tex.—City awarded contract at \$86,058 to pave 37,778 square yards with bituminous and at \$18,444 to pave 7933 square yards with wood blocks.

Bradenton, Fla.—Manatee county awarded contract to construct road from Bradenton to Sarasota.

Galveston, Tex.—Galveston county awarded contract at \$37,406 to construct road from Broadway to causeway.

Greenville, Tex.—City awarded contract for bituminous pavement on various streets.

Houston, Tex.—Harris county receives

TYPICAL INDUSTRIAL VIEWS AT MUSKOGEE, OKLA.



MUSKOGEE OIL REFINERY, WITHIN LESS THAN A MILE OF ITS OWN WELLS.



PLATFORM OF THE MUSKOGEE COTTON COMPRESS DURING THE SEASON.

bids until May 10 for paving Washington county road.

Houston, Tex.—Houston Harbor Co. awarded contract for grading streets in Houston Harbor Addition.

Jackson, Miss.—Hinds county awarded contract to construct 20 miles of road; \$200,000 of bonds have been issued.

Maysville, Ky.—City awarded contract for paving about 20,000 feet of sidewalks.

Nashville, Ga.—Berrien county awarded contract for constructing nearly 11 miles of road and bridging drains; right of way 30 feet wide.

Nashville, Tenn.—Board of Public Works awarded contract at 12 to 13 cents per square foot to construct sidewalks on several streets.

Norfolk, Va.—City awarded contract at 14½ cents per linear foot to place curbing on Bank street; also awarded contract at 80 cents per square yard to construct granolithic walkway in rear of courthouse.

Pawhuska, Okla.—City awarded contract for 22 blocks of asphalt paving.

Washington, D. C.—District Commissioners awarded contract for asphalt resurfacing and repairing.

Contracts to Be Awarded.

Alexandria, Va.—City contemplates improving streets; cost may aggregate \$73,000.

Alexandria, Va.—City contemplates improving streets, and may expend \$73,000.

Baltimore, Md.—Messerschmidt & Cohlstead will construct roads in connection with land development.

Big Spring, Tex.—City ordered construction of sidewalks on various streets.

Bluefield, W. Va.—City receives bids until May 12 for grading and macadamizing Princeton avenue.

Chattanooga, Tenn.—City received bids May 1 for paving several streets with asphalt macadam.

Cumberland, Md.—Allegany county receives bids until May 6 for improving roads; work includes grading and macadamizing 9000 feet.

Dallas, Tex.—Dallas county and Dallas Automobile Club are considering construction of macadam road from Red River to Galveston; distance about 400 miles; 150 miles already macadamized.

Dublin, Ga.—Laurens county contemplates road improvements.

Fort Lauderdale, Fla.—Chambers Land Co. will construct 15-mile road.

Frederick, Md.—City opened bids May 4 for constructing combined brick and cobble gutters.

Fort Smith, Ark.—City will curb Garrison avenue.

Lockhart, Tex.—City will construct cement sidewalks in residence section.

Mt. Olivet, Ky.—Robinson county will expend about \$5500 for constructing road.

Muskogee, Okla.—City receives bids until May 8 for paving and otherwise improving streets in improvement district No. 120.

New Orleans, La.—State Board of Engineers will invite new proposals for constructing highway from Colfax to Rochelle.

Oklahoma City, Okla.—City opens bids May 9 for paving streets with two-inch asphaltic concrete on five-inch Portland cement concrete foundation, etc.

Petersburg, Va.—City opened bids April 27 for constructing 2000 yards of granite-block pavements.

Prague, Okla.—Company organized to construct seven miles of road.

Rockville, Md.—Montgomery county opened bids May 2 for improving State road from Rockville to Norbeck.

Richmond, Va.—City received bids May 4 for grading hillside in Taylor's and Chimborazo parks.

Selma, Ala.—City will pave Broad

street with asphalt, hessian or bitulithic; also passed ordinance for paving three blocks in business section with brick.

St. Louis, Mo.—City receives bids May 5 for reconstructing several streets.

Sumter, S. C.—City will pave North Washington street.

Tampa, Fla.—City receives bids until May 5 for constructing 7990 square yards of driveway in Woodlawn Cemetery; paving to be of shell six inches deep in center and four inches deep on side.

Tupelo, Miss.—City opened bids May 2 for paving to include 2630 square yards of tar macadam or similar paving and 21,200 square yards of gravel streets.

Tuscaloosa, Ala.—City opens bids May 4 for 4155 yards of sidewalk, 1300 feet of curb and 4465 feet of combined curb and gutter.

Waxahachie, Tex.—Ellis county contemplates beginning construction next month of 200 miles of roads; amount available, \$555,000.

Waynesville, N. C.—Southern Assembly opens bids May 11 for grading 1½ miles of driveway.

Webb City, Mo.—City opened bids for constructing 7823 square yards of asphalt macadam pavement, 2371 linear feet of concrete combined curb and gutter and 1215 square feet of concrete sidewalk.

A Mary Washington Memorial.

Mr. Thomas H. Harris of the Fredericksburg (Va.) Good Roads Association, is seeking the establishment of a national highway 100 feet wide of standard macadam construction from Washington by way of Mt. Vernon to Fredericksburg, Va., to be known as the Mother Washington Memorial Highway.

Cement Gravel for Roads.

Among the extensive plans for road improvements in the Southwest is that of Ellis county, Texas. J. C. Lumpkins of Waxahachie, County Judge, writes to the MANUFACTURERS RECORD that the amount to be spent is \$555,000. The roads will be built of cement gravel found in locality, and 200 miles of road are expected to be built. The work is undertaken by commissioners acting as road supervisors, employing local labor, with the county surveyor giving what aid that may be needed in that line.

The Peninsula Highway.

Under the impetus of the Virginia Peninsula Good Roads Association, headway is being made in the construction of the highway to extend from Newport News to Richmond, Va., by way of Williamsburg. With its branch to Yorktown, this highway, which will be of sand-clay, will traverse parts of Warwick, York, James City, New Kent and Henrico counties. It is expected to be completed by September 1.

Southern Farmers Buy Autos.

A business man traveling through the South in a letter to the MANUFACTURERS RECORD says:

"On my trip so far I have noted some wonderful developments in the South. The thing that made an impression on my mind was the fact that every small country town I made the automobile was in evidence. I was not out of sight of an auto on my trip, and I made quite a few small towns. In Opelika it was said in my presence that a young country boy in that neighborhood was getting rich on an auto agency, having sold 40 or 50 autos to farmers and others."

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Big Creosoting Plant Contracted For.

Referring to the Atlantic Coast Line Railroad Co.'s recently-mentioned creosoting plant, William A. Fisher, general agent of the company, Wilmington, N. C., writes the MANUFACTURERS RECORD as follows:

"The Atlantic Coast Line Railroad Co. has contracted with the Allis-Chalmers Company of Milwaukee to furnish and erect at Gainesville, Fla., a two-cylinder timber-treating plant of the most modern construction; cylinders 138 feet long and 6 feet 2 inches in diameter, and capacity of plant will be about 1,250,000 ties annually. However, a great deal of structural timber, marine piling, etc., and hence fewer ties than the figure above given, will be treated.

"The building will be constructed on concrete foundations of structural steel, with corrugated iron sides and roof, and in addition to the usual cylinders, pumps, boilers, etc., will have a machine shop under the same roof with the other machinery. A small experimental cylinder is included in the equipment.

"In addition to the necessary storage tanks at the site of the plant, adequate storage for creosote will be provided at the export terminal docks of the railroad company at Jacksonville, Fla., and the company will carry oil from these tanks to the plant in its own tank cars.

"It is proposed to use only the full-cell process of impregnation at the outset, but the plant will so be arranged that the use of other processes may easily be provided for with the minimum amount of changes in the equipment. Erection will probably begin some time during July, and it is expected to have the plant in full operation by or before January 1."

To Develop Cut-Over Pine Lands.

A tract of 26,000 acres of cut-over lands in George county, Mississippi, is to be developed by the Lampton Realty Co. of Magnolia, Miss., and Hibernia Building, New Orleans. This land is located near the Chicago, Mobile & New Orleans Railroad and the Pascagoula & Northern. The tract will be known as the "Lampton Lands of Mississippi." It is composed mostly of pine, but has some hardwood lands. Although the timber has been very generally cut off, there is enough standing for preliminary building purposes. The land is generally level and the soil is reported as good. It is adapted to general agriculture, pecan groves, truck farming, small fruits, etc., and is to be colonized by Northern farmers. The first offerings will be made at from \$10 to \$30 per acre for the raw land, according to location and quality of the soil. Four townsites will be established, and in their vicinity the land will be cut into small tracts. S. S. Thorpe, 1627 National Bank Building, Chicago, who has been made sales manager for the property, has had experience in establishing colonies in various places throughout the country. The general business of the company will be conducted through the New Orleans office.

Details of Rodman Lumber Mill.

The Rodman (Fla.) Lumber Co. has sent the MANUFACTURERS RECORD further details of the company's new mill, briefly described by telegraph last week. Contracts for the steel and erecting the building were awarded to the Converse Bridge Co., for the machinery and installation to the Chattanooga Machinery Co., and for

the boilers to the Casey-Hedges Company, all of Chattanooga. The main building will be 218 feet long by 44 feet wide, and the power-house will be 64 feet long by 44 feet wide, of steel construction set on concrete. Fuelroom will be erected of brick, covered with a concrete roof 24x30 feet. Wet logs will be used, and they will be taken from a vat made of reinforced concrete 4 feet deep and 160 feet long by 6 feet wide at the bottom and 8 feet wide at the top. The entire plant will be lighted by electricity. It will have a capacity of 100,000 feet of lumber in 10 hours, and will cost \$65,000.

Selling Cut-Over Lands.

A. W. Standing, general manager Houston Oil Co. of Texas, writes to the MANUFACTURERS RECORD:

"We have just completed a cruise of our timber holdings, and while practically all of the pine timber is contracted for, we have a very large amount of hardwoods, such as oak, gum, hickory, beech, cypress, magnolia, etc., which we are to put on the market in the near future. We as yet have not formulated a general plan for the disposal of our lands, but are at the present time selling them in small quantities. Taking into consideration the price at which these cut-over lands are selling in East Texas, more revenue can be derived per acre out of them than out of high-priced lands in the North in such States as Illinois, Iowa and Kansas. Judging from the number of people that are coming into Texas and buying homes, one cannot help but believe that there is a great future for this State."

Slack Cooperage in 1909.

The aggregate value of slack cooperage stock produced in 1909 was, according to the Census Bureau, \$20,195,125, of which staves represented \$11,477,399, heading 86,138,881 and hoops \$2,578,845. The output by individual Southern States was as follows:

States.	Staves, (1908's.)	Heading, (1909 sets.)	Hoops, (1908's.)
Alabama.....	14,977	4,049	4,150
Arkansas.....	25,162	25,549	26,164
Florida.....	25,664	1,479	306
Georgia.....	8,529	923	*
Kentucky.....	52,089	4,245	180
Louisiana.....	24,399	2,162	14,805
Maryland.....	28,521	428	*
Mississippi.....	22,962	*	2,000
North Carolina.....	33,478	2,243	503
South Carolina.....	5,257	*	*
Tennessee.....	67,127	3,145	13,130
Texas.....	2,764	*	1,425
Virginia.....	199,872	9,696	*
West Virginia.....	9,744	160	*
Total.....	751,486	54,079	52,663
Missouri.....	196,081	7,333	46,223
United States...	2,029,548	140,234	375,793

*No separate figures.

White Lumber Mill Completed.

The White Lumber Co. of Johnson City, Tenn., has completed the mill it has been erecting at Elk Park, N. C. This plant includes a 36x110-foot building equipped with machinery for a daily output of 50,000 feet of lumber. Clark Bros. of Belmont, N. Y., were the contractors who furnished the machinery. Henry Disston & Sons of Cincinnati furnished the circular and band saws.

Broom Factory Supplies.

Hostilio E. Montano, Guayan, Porto Rico, writes the MANUFACTURERS RECORD:

"Taking advantage of the very kind offers you make me in regard to the broom factory which I am about to put up here, I beg you, if you please, to put me in communication with people who handle the straw for that purpose as well as makers of plain and decorated handles for the brooms, twine, wire, tacks, nails and other materials necessary for the production of a finished product. I wish the suitable parties would send me their price lists, etc., without delay, as it would save me much time."

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

C. & O.'S NEW COAL ROAD.

Charters Obtained for a Branch 43 Miles Long in Two States.

Concerning the railroad company recently chartered by officials of the Chesapeake & Ohio Railway to build a branch of that system, an officer of the company furnishes the following:

"Charters have been obtained in Kentucky and Virginia for a railroad from a connection with the Big Sandy branch of the Chesapeake & Ohio Railway Co. in Kentucky at the confluence of Levisa and Russell forks of Big Sandy River, extending up Levisa Fork 28.8 miles to the boundary line between the States of Virginia and Kentucky. This constitutes the 'Levisa River Railroad Co.' of Kentucky; the line then extends on up Levisa Fork 14 miles to Grundy, Buchanan county, Virginia, this part being covered by the Virginia charter of 'the Levisa River Railroad Co.' Surveys have been made and maps of location filed, and if expectations are realized the Chesapeake & Ohio Railway will become the owner of the entire capital stock of the two companies.

"The character of the country is rough; the maximum degree of curvature will be moderate, and the grade of the road will descend gently, following the slope of the river from Grundy to Big Sandy. No contracts have been let, nor can I now give any information as to the date when the work will begin."

As heretofore noted, this line will cross the mountains several miles north of the Breaks of the Big Sandy River, through which pass it has been expected that a connection would some day be made between the Chesapeake & Ohio and the Carolina, Clinchfield & Ohio railroads. It will traverse a rich timber and mineral region. Whether this construction means that a junction will be made with the Clinchfield by a route different from that already chosen does not yet appear.

The Chesapeake & Ohio, according to a report from New York, is negotiating to secure control of the Clinchfield road by lease, which, if agreed upon, will, it is said, result in the construction of the long-projected extension of the Clinchfield from Dante, Va., to Elkhorn City, Ky., on the C. & O., about 40 miles. This would necessitate some very heavy work, the engineering problems presented being, to quote an official, as difficult as any on the route through the high mountains of North Carolina. When the two roads are connected, as they doubtless will be in a few years, they will form a route from the Great Lakes down to Spartanburg, S. C., which is now the Southern terminus of the Clinchfield, but that company has long projected an extension to Columbia and Charleston, S. C., which may then be built to obtain a seaport terminal south of Hatteras.

B. & O. OFFICERS SOUTH.

Trip Over the Clinchfield Route and Anticipations as to Results.

A party of Baltimore & Ohio Railroad Co. officials, in the course of an inspection trip over the lines of their system during the past week, made a detour southward as far as Atlanta, traveling in part over the Clinchfield Railway to Spartanburg, S. C., and thence over the Southern to the Georgia capital, whence they returned to the Baltimore & Ohio lines via Chattanooga. In the party were President Daniel Willard and Vice-Presidents Geo. F. Randolph and George M. Shriver, be-

sides George H. Campbell, assistant to the president; F. L. Stuart, chief engineer, and others.

More than unusual interest attaches to this diversion into the South because of anticipations that the Baltimore & Ohio Railroad may become closely related to the Chesapeake & Ohio and the Clinchfield lines when they are connected as proposed via the breaks of the Big Sandy through the Virginia and Kentucky mountains, or possibly by way of the Levisa River Railroad, which officers of the Chesapeake & Ohio have recently chartered to cross from Kentucky into Virginia several miles to the northward of the breaks. Last fall a party of railroad officers, including prominent men of the Baltimore & Ohio, went down into Kentucky along the Chesapeake & Ohio about the time that the Consolidation Coal Co. announced its plans to build the line along Shelby Creek (now under construction) to develop large coal fields in Kentucky. The Chesapeake & Ohio has long proposed to extend northward across Ohio, but there is a possibility that some arrangement may be made with the Baltimore & Ohio, which controls the Cincinnati, Hamilton & Dayton road, for the desired outlet to the Lakes to ship coal West.

LOUISIANA SOUTHERN DEAL.

Rumors That an Extensive Truck-Raising Development Will Result.

William C. Dufour, counsel in New Orleans for the St. Louis & San Francisco Railroad, says a report from there, has confirmed the reported lease of the Louisiana Southern Railroad by his company. The line is leased for 12 years.

It is rumored in connection with this that the region traversed by the Louisiana Southern is to be developed as a great truck-raising country, and that the Frisco will build a line from Memphis to Baton Rouge in order to make a direct route to the St. Louis and Chicago markets. Mr. Dufour did not, however, confirm this report, but he is quoted as saying that there is no intention to establish a new port on Lake Borgne or elsewhere east or south of New Orleans. This contradicts assertions reported from that city when the lease was first announced. The Frisco will proceed with its plans to complete the slips at Chalmette.

The Louisiana Southern, it is further asserted, will be extended to Pointe-a-la-Hache and frequent service established, possibly with motor cars. It is understood that the Frisco will have the right to purchase the road at the termination of the lease if it desires. The line is to be immediately improved, and reports say that \$1,000,000 will be spent for its rehabilitation.

RAILROAD CONTRACT LET.

Tuscaloosa Mineral Line to Be Constructed to Brookwood, Ala.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., May 1.

It has been announced that a Birmingham firm, Dunn & Lallande, with offices in the American Trust and Savings Bank Building, has secured the contract for the 18 miles of railroad that is to be built by the Tuscaloosa Mineral Railroad Co. from Tuscaloosa to Brookwood. F. G. Blair is president of the company, and Erwin Sloan chief engineer. The contract represents between \$300,000 and \$400,000, and the railroad when completed will have been built at a cost approximately of \$500,000.

It is understood that work will be started immediately and pushed rapidly. It is estimated that it will take about 12 months to complete it. The benefit of the road to the mineral district is great, and other new lines are expected. The Tusca-

loosa Mineral road will connect at Brookwood with the Louisville & Nashville Railroad.

New Equipment, Rails, Etc.

The Gloucester Lumber Co., Rosman, N. C., is in the market for rails for its logging line.

The San Antonio & San Jose Interurban Railway, San Jose, Tex., is reported in the market for 50 or 60-pound rails. J. Otis Parrish, cashier of the Bank of San Jose, may be addressed.

The Atlantic Coast Line is reported in the market for about 5000 tons of rails.

The Baltimore & Ohio, says a market report, has placed an order with the American Bridge Co., New York, for 1600 tons of steel for a bridge at Wheeling, W. Va. It is denied that the company has placed its rail orders.

The Enid, Ochiltree & Western Railway has purchased from the Southern Iron & Equipment Co. a locomotive, a combination passenger and baggage car, three flat cars and three box cars, says a dispatch from Austin, Tex.

The Texas Southeastern Railway is reported to have purchased from the American Car & Foundry Co. of St. Louis a 56-foot passenger car.

The Southern Railway, says a report from Philadelphia, has ordered 50 Mikado type locomotives from the Baldwin Works of that city. The road is also said to have ordered 20 Pacific type locomotives from the American Locomotive Co., New York, and 23 switch engines from the Lima (O.) Locomotive and Machine Works. It is further stated that the company has ordered cars as follows: Thirty-five passenger coaches from the Harlan & Hollingsworth Corporation, Wilmington, Del.; 10 combination passenger and baggage cars from the St. Louis (Mo.) Car Co., and 20 steel underframe postal cars from the American Car & Foundry Co., St. Louis.

The Illinois Central is reported getting prices on 94 all-steel passenger cars. The Western Maryland has ordered 500 steel hopper cars from the Pressed Steel Car Co., Pittsburgh, Pa.

The Florida East Coast Railway, says a market report, has ordered 14,000 tons of rails from the Pennsylvania Steel Co., Steelton, Pa.

The Louisville & Nashville Railroad is reported to have ordered the construction of 500 more cars at its New Decatur (Ala.) shops.

The Galveston & Houston Interurban Railway, says a dispatch from Houston, Tex., has received 12 of its cars from the Cincinnati (O.) Car Co.

The Seaboard Air Line, says a market report, has ordered 12,000 tons of rails from the Maryland Steel Co., Sparrows Point, Md., and 3000 tons of open-hearth rails from the Tennessee Coal, Iron & Railroad Co. to be rolled at Ensley, Ala.

The Rock Island system is reported to have ordered 10,000 tons of rails from the Illinois Steel Co., Chicago.

The Georgia & Florida Railway is reported to have ordered two locomotives from the Baldwin Works.

Railway, Light and Power Merger.

An officer of the Virginia Railway & Power Co., Richmond, Va., confirms the report of an agreement between the financial interests concerned for the merger and consolidation of the Norfolk & Portsmouth Traction Co. with the Virginia Railway & Power Co. The latter controls and operates the electric railway, light and power properties in and around Richmond and Petersburg, Va., including the electric railway connecting those cities.

The Norfolk & Portsmouth Traction Co. controls and operates the electric rail-

ways, light and power properties in and around Norfolk and Portsmouth, Va., including lines to the seaside resorts in that region. It is stated that the combined gross earnings of the two companies are approximately \$4,500,000 a year. The merger is to take effect July 1. It is understood that William Northrop of Richmond will be president of the consolidated company.

Asheville Railway Work.

Board of Trade,

Asheville, N. C., April 28.

Editor Manufacturers Record:

Active work has been started by the Asheville Electric Co. on relaying the Patton avenue line with 70-pound steel rails and paving between the rails with vitrified brick, the old paving being belgian blocks. There are several other lines which will be relaid with heavier steel, and in a number of places they are to be paved between the rails. Additional side-track facilities will be put in on various divisions and new gas mains will be laid, entailing a total expenditure of something over \$100,000, which is made necessary by the rapidly-increasing business on the street railway and the demands for gas facilities on streets where there are now no gas mains.

N. BUCKNER, Secretary.

Second Track and Lower Grade.

An officer of the Illinois Central Railroad says that it will build 13 miles of second track from Frenier to Orleans Junction, La., this being connected with existing second track at each end and complete the double track into New Orleans. Pile bridges with ballast floors will be built as needed. The country is swampy, and filling will be hauled in by trains and the work done by the company's forces.

It is also proposed to reduce grades on 43.6 miles south of McComb, Miss., to give a maximum of three-tenths of 1 per cent. from New Orleans to McComb, 103 miles. Contract is not yet awarded. A. S. Baldwin of Chicago is chief engineer.

Santa Fe Proposes a Branch.

A press dispatch from Carthage, Tex., says that the Santa Fe system contemplates building a line from Carthage to Shreveport, La., about 50 miles, opening up a new timber country.

Railroad Notes.

Frank P. Derr of Baltimore is reported to have invented and patented a method of constructing a monorail railroad.

The Winston-Salem Southbound Railway, it is announced, was formally opened for through train service, both passenger and freight, on May 1.

An official communication says that the Frisco system expects to complete its terminal improvements at Bellevue, near Memphis, Tenn., by August 1.

A telegram from New York says that \$2,400,000 of 5 per cent. bonds of the Augusta & Aiken Railway & Electric Corporation of Augusta, Ga., are being offered for sale.

Official announcement is made that the Kansas City & Memphis Railway Co. on May 1 absorbed the Arkansas, Oklahoma & Western Railroad and the Monte Ne Railway, and also assumed their entire control and management.

The Peach River lines, according to an official announcement, established on May 1 their general offices in the Keith Building at Beaumont, Tex. The roads are the Peach River & Gulf, the Galveston, Beaumont & Northeastern and the Riverside & Gulf.

The stockholders of the Chesapeake & Ohio Railway Co. at the special meeting

April 29 approved the proposed bond issue for \$125,000,000, previously reported. About \$11,000,000, it is understood, will be used for refunding and the rest from year to year, as may be decided, for building or acquiring new lines, terminals, equipment, and for improvements.

A dispatch from Norfolk, Va., says that the stockholders of the Norfolk & Southern Railroad at their annual meeting voted to join with the Norfolk & Western and the Virginian railways in guaranteeing not more than \$2,600,000 of bonds for the proposed new union station which will be erected by the Norfolk Terminal Railway Co., in which the roads are interested.

According to a report from Johnson City, Tenn., it is proposed to build an electric railway from there to Newport, Tenn., about 55 miles, via Conkling, with power furnished from a plant at Embreeville. While no names of the parties interested are mentioned, it is said that the plan is to organize a company with \$100,000 capital. People in Washington, Greene and Cocke counties are said to be agitating the project.

MINING

Texas Phosphate Rock.

Director Wm. B. Phillips of the Bureau of Economic Geology and Technology, University of Texas, Austin, writes to the MANUFACTURERS RECORD:

"I have just returned from a considerable absence in Presidio county, looking into the reports of the discovery of nitrate of soda there, and have your communication respecting the reported discovery of phosphate rock at or near Harper, Gillespie county. I do not know anything of this matter. Harper is a postoffice in the extreme western part of Gillespie county, and is about 35 miles from any railroad. The nearest railway point would be Kerrville, Kerr county, the terminus of the San Antonio & Aransas Pass Railway from San Antonio northwest. Some time ago there was a report in a newspaper of the finding of phosphate rock near Fredericksburg, Gillespie county, about 35 miles from a railroad, but the matter has not been investigated. We receive many samples of so-called phosphate rock from divers localities in Texas, but they prove to be a bituminous limestone, the odor from which, on friction, is mistaken as an indication of phosphate rock."

Georgia Silica Sand Development.

The Rocky Face Silica Sand Co., Rocky Face, Ga., intends to install a complete plant for crushing 500 tons of sand daily, and is in the market for the necessary boilers, engines, compressors, etc. This company was recently incorporated with a capital stock of \$100,000, and its officers are: President, W. P. Laramore; vice-president, W. R. Satterfield; treasurer, G. S. Landers.

To Mine Virginia Mica.

G. B. Robertson, Box 161: W. S. Morrison and associates, all of Danville, Va., are planning the organization of a company to develop 76 acres of mica land near Rocky Mount, Va. They will want hoisting and milling machinery, but have not as yet determined specifications of the plant.

The Oil Mill Machinery Manufacturers and Supply Association, Mr. F. M. Smith of Dallas, president, and Mr. W. H. Marshall of Chattanooga, Tenn., secretary-treasurer, will meet at Galveston, Tex., May 25-27.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

For American Manufacturers.

J. Bruhn, Agency, Copenhagen, Denmark, writes the MANUFACTURERS RECORD:

"In order to put American manufacturers in direct connection with buyers here I propose that you advertise in your journal that they could write to me, sending letters and booklets for distribution amongst dealers here, and at the same time I distribute those I can write manufacturers giving list of names of these buyers so he could proceed to work them."

"For my work here I propose the manufacturer send me 30 cents for each dealer he wanted to be referred to, the minimum being \$1, and when over \$3 the charge to be 20 cents per dealer. For dealers in Sweden 35 cents per dealer, and when over \$3.50 to be 25 cents per dealer."

"I ask you kindly to take this matter into careful consideration, as I think this will be a very good and easy way to put manufacturers in direct connection with dealers."

"Regarding reference as to my liability, responsibility and character, you will be able to get these from the party who referred you to me, as also the Den Danske Landmandsbank, Copenhagen."

To Represent Manufacturers.

C. Cusicanqui M., 25 Broad street, Room 1623, New York, writes the MANUFACTURERS RECORD:

"I have received a copy of your publication entitled 'MANUFACTURERS RECORD,' where I have been able to find advertised many articles that are of interest to me. On addressing manufacturers, I shall not fail to mention your important review."

"Making use of your kind offer to publish gratis all matters concerning the propagation in my country of American industries, I beg to request you to insert the following:

"C. Cusicanqui M., American manufacturers' representative in La Paz, Bolivia, wants catalogues and prices from the manufacturers who wish to extend their business in Bolivia."

"Address correspondence up to April 10 next to New York, 25 Broad street, Room 1623."

Canada Wants Hardware Specialties.

Arthur Hogg, 50 Front street East, Toronto, Canada, writes the MANUFACTURERS RECORD as follows:

"Shall be glad to hear from some of your clients, manufacturers of hardware specialties preferred, with the view to arranging to represent their products in Canadian territory on commission. Perhaps you can place this inquiry to advantage in your journal or with manufacturers wishing to extend their markets to this territory."

For Developing Hardwood Timber.

Pedro Miguel, Canal Zone, Republic of Panama, writes the MANUFACTURERS RECORD:

"We (several of my friends and myself) are making preparations to cut and market the valuable hardwoods that are now growing on our lands here in Panama. We will, therefore, in the not distant fu-

ture require various classes of machinery, appliances, etc. We would be pleased to obtain catalogues descriptive of appliances that are designed to produce the 'destructive distillation of wood.' We will require this class of appliance in addition to the sawmill machinery, etc., that is advertised in your most estimable journal. We have written to several advertisers of sawmill machinery, but we are anxious to obtain the names and addresses of firms that handle wood distilling and carbonizing appliances, etc. If you can, please supply us with the names and addresses of firms that handle this class of appliances."

Asbestos, Oil Products and Grindstones.

Victor Rabe, Kontor, Catharineastr. 415, Hamburg, Germany, writes the MANUFACTURERS RECORD:

"As to my opinion about the difficulties of introducing American goods, my experience is that your countrymen generally quote only f. o. b New York, instead of port of destination, and on account of the great rivalry they lose the sale by this omission. I have been about during 10 years in Mexico and South America, and during this time I made the above-mentioned observation. Anyhow, the American manufacturers are the best in the world, proved by their great progress. Please connect me with manufacturers of grindstones, asbestos products, oil products and paraffin."

Brushes, Fire Extinguishers, Seats.

M. J. Gonzales, Corral, Chile, writes the MANUFACTURERS RECORD:

"I would like very much to find a manufacturer of brushes for shoes (blacking brushes), and am prepared to place a large order for them, but the price must be made very low. I also want to know something about chemical fire extinguishers, but the price of these must also be very low. I want to communicate directly with a factory making seats for easy chairs (resting chairs). Also I wish something in line of practical photography for postal cards. I shall be under many obligations if you help me to get what I want and put me in direct communication with the factories. Optical apparatus for amusement and instruction is also desired."

Cotton Oil and Vaseline.

Alberto Keller, Hilario Penasco 1, Madrid, Spain, writes the MANUFACTURERS RECORD:

"I have pleasure in asking you to kindly let me know the addresses of some manufacturers of non-refined vaseline for sale to druggists, chemists, perfumers, etc. There is an Indian Refining Co. advertising in your journal; their Hamburg branch, to whom I have applied, informs me that refined vaseline is not entering their salable lines. As these products come from the petroleum districts of the United States, I have no doubt that you will be in a position to put me in touch with some exporters of this class of vaseline. Furthermore, I shall be glad if you will kindly let me know the addresses of some important Southern manufacturers or exporters of cottonseed oil for cooking purposes."

Piece Goods, Glass Work, Soap, Etc.

Chaitram Khuller & Co., Amritsar, India, write the MANUFACTURERS RECORD:

"We have been informed that your MANUFACTURERS RECORD is the best thing to introduce ourselves to some good manufacturers of lines in which we are interested. Supply us with a copy of your valued paper and on receipt we shall send you the annual subscription. We would further request you to give a little space in your journal that we will sell piece

goods of all kinds; also soaps, toys, glass work and fancy goods. If any firm will like to deal with us we will be much pleased to extend our services. The Chartered Bank of India, Australia and China will give our reference."

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

The Cotton Movement.

In his report for April 28, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 240 days of the present season was 11,040,029 bales, an increase over the same period last year of 1,471,116 bales. The exports were 6,864,443 bales, an increase of 1,647,480 bales. The takings were, by Northern spinners, 1,836,511 bales, an increase of 8300 bales; by Southern spinners, 1,834,905 bales, a decrease of 16,679 bales.

Kansas City Cotton Mills.

The Kansas City (Mo.) Cotton Mills has issued bonds for \$250,000 to liquidate indebtedness and provide working capital. The company is preparing to begin operations about July 1, and its manager will be Spencer Turner of the J. Spencer Turner Company, New York. William A. Otto of that company will be sales agent, and Byron F. Card, formerly of the Tallassee Manufacturing Co., Tallassee Falls, Ala., will be superintendent.

Roberdel Mill Improvements.

The Roberdel Manufacturing Co., Rockingham, N. C., will erect a one-story 62x114-foot addition, which on completion will be equipped with the machinery in the present beaming and slashing room, while the latter will then be equipped with 98 4x1 box looms. These looms and additional carding and spinning machinery have been purchased.

Knitting Mill Machinery Prices.

J. C. Miller of Jefferson, S. C., is interested in a plan to establish a knitting mill and wants prices and data on the necessary machinery.

For a 5000-Spindle Mill.

The Waco Business Men's Club, G. K. Hardwick, assistant secretary, Waco, Tex., asks estimates on the erection of a 5000-spindle cotton mill.

Textile Notes.

The Middleburg Mills of Lexington, S. C., will increase capital stock from \$100,000 to \$300,000.

The Cleveland (Tenn.) Woolen Mills will add four sets of cards, 10 looms, 2 fulling mills, 1 cloth washer, etc., all of which have been purchased.

The Maline Mills of Winston-Salem, N. C., will install additional equipment, including 5 knitting machines, 12 sewing machines, 1 napper, etc. This new equipment has been purchased.

The Randolph Manufacturing Co., Franklinville, N. C., will install 100 looms and finishing machinery additional to present equipment. The Stafford Company, Readville, Mass., will furnish the looms. Both contracts were awarded through Whitted & White of Charlotte.

MECHANICAL

Tarvia Modern Pavement.

In striving to meet the exacting requirements of the broad radiating thoroughfares extending from the metropolitan centers a new form of construction has been developed by the Barrett Manufacturing Co., Philadelphia, Pa., during the past two years, to which the name of

smooth, but not enough should be used to leave any loose material on the top. The road is rolled again until perfectly smooth and a final coat of Tarvia-A, amounting to one-half gallon to the square yard, is sprayed on and the road finished by adding pea stone or screenings and giving a final rolling.

The Tarvia modern pavement is described at some length in order that engineers may recognize its novel features and appreciate its merits. The thorough in-



SPRAYING TARVIA-X ON BROKEN STONE AS A BINDER.

"The Tarvia Modern Pavement" has been given.

In this construction Tarvia, the trade name of the company's product, enters not only into the top surface of the road, but is carried down beneath the top course. Coupled with the use of Tarvia throughout the road is the use of larger stone in the second course. Experiments with this form of construction through the past two years have shown its durability where a considerable amount of traffic of all descriptions is to be carried on the road.

Splendid examples of the Tarvia modern pavement construction can be seen in Massachusetts on Massachusetts avenue in Cambridge, on Beacon street, Brookline, and in Worcester. In Canada roads have been built which are giving excellent service in Westmount; on the Victoria Pier, Montreal; in Berlin, Ontario; Guelph, Ontario, and Stratford, Ontario.

The foundation of the Tarvia modern pavement is prepared as for ordinary macadam, but care should be taken to see that this foundation is properly drained and properly consolidated, for the best of surfaces can be destroyed by softness and movement below. Upon the foundation the base course is laid, using run of crusher stone three inches to one inch in size. Usually a thickness of four inches, measured after rolling, will be sufficient. This course is filled, rolled as for ordinary macadam and then has spread upon it one-half inch of clean sharp sand or good gravel. Over this, without further rolling, is sprayed Tarvia-A (seen accompanying illustration) to the amount of one gallon to a square yard. Another layer of run of crusher stone (three inches to one inch) is spread over the Tarvia-A to such a depth that when rolled this course will be two and one-half inches thick. It is then rolled thoroughly with a steam roller until the Tarvia and sand are drawn up between the stone and until this layer of stone is bedded firmly into the stone below. The layer of Tarvia and sand holds this course firmly in place and cements the top course of the road thoroughly to the bottom course. A spraying of Tarvia-X, a denser grade of Tarvia, is then given to the road, using one and one-quarter gallons to a square yard, and a thin layer of three-quarter-inch stone is spread over the surface. Enough stone must be used to fill in all the chinks of the surface, making it

corporation of the Tarvia throughout the road insures the binding of every part and the elimination of the internal friction, which is so destructive to macadam roads.

The use of large stone throughout the road and in the surface layer insures, it is claimed, a structural strength not obtainable with smaller sizes of stone, and this strength-giving principle has long been recognized abroad, but with a water-bound macadam it was not possible to use this form of construction satisfactorily.

The use of the Tarvia modern pavement specification, it is said, will give to engineers all the advantages of using a larger size stone without any of its disadvantages. The increased strength and wearing qualities of the larger stone are presented to the best advantage, since the stones are held firmly in place, with no chance of movement, and with the wear taken alone on the upper surface.

The Tarvia modern pavement, like other forms of Tarvia construction, it is claimed, is inexpensive compared with the other forms of bituminous construction, and an engineer, by properly designing the road, can often save enough in stone, in watering, in screenings and in rolling to offset much of the cost of the Tarvia.

Diamond Rubber Co.'s Turbine Installation.

Upon the invitation of the Diamond Rubber Co. and its chief engineer, Henry Burgner, members of the Akron Lodge, N. A. S. E., made an inspection recently of the Diamond Rubber Co.'s power plant at Akron, O., including the new 1500-horsepower low-pressure turbine recently installed by the Allis-Chalmers Company of Milwaukee.

Mr. Burgner, who is an active and enthusiastic member of the Akron Lodge, headed the reception committee. The visitors were first shown through the general offices, and considerable surprise was expressed at the extent of the Diamond factories and offices. The boiler-house and the engine-room were then visited, and after a complete inspection the guests were addressed by Mr. Roe, mechanical engineer of the Diamond Rubber Co., and Mr. Wolf of the Cleveland office of the Allis-Chalmers Company.

Mr. Roe's address contained a description of the turbine engine that is of interest to non-technical as well as technical

readers, and was in part as follows:

"The turbine consists essentially of a fitted casing through which is run a shaft caused to revolve by the dynamic force of the steam passing through between the revolving shaft and the casing. In the space between the revolving shaft and the casing are interposed certain vanes or deflectors called blading, so placed as to obtain from the passing steam the great dynamic force tending to rotate the shaft. This part comprises the steam or motive part of the turbine, the shaft itself being carried through and coupled to its driver or generating unit, which arrangement, due to its high rotative velocity, makes it a very satisfactory means for driving an electric generator. The theory has been worked out that a turbine can be worked economically and efficiently with low-pressure steam (below 10 pounds) as a medium for obtaining power through a high vacuum.

"After exhaustive calculations as to the quantity of steam, air, condensation, etc., given by the various auxiliary units and different pieces of apparatus throughout the plant, we believed that we had sufficient steam then going to waste to make an adequate, constant supply to meet the demands of a low pressure turbine of about 1250 kilowatts capacity.

"The low-pressure turbine unit as here installed comprises the following different pieces of apparatus: The steam turbine for motive power, steam condenser, circulating pumps, dry vacuum pump, oil cooler and electrical generator. This turbine is an Allis-Chalmers low pressure Parsons type of turbine, taking steam at about 16 pounds absolute and discharging the same to a special condenser giving 27½ inches of vacuum. It has also a high-pressure connection controlled by the governor in such a manner as to admit steam when the supply from the low-pressure main drops below a certain predetermined point.

lift. The motor power for driving these pumps is a Terry turbine direct connected and running at 1200 R. P. M.

"Also connected with the exhaust chamber of the turbine is a pipe leading to a rotary dry vacuum pump for taking away the excessive air brought along with the steam. This vacuum pump is able to maintain a vacuum of 27½ to 28 inches with the condensing water at 70 to 80 degrees.

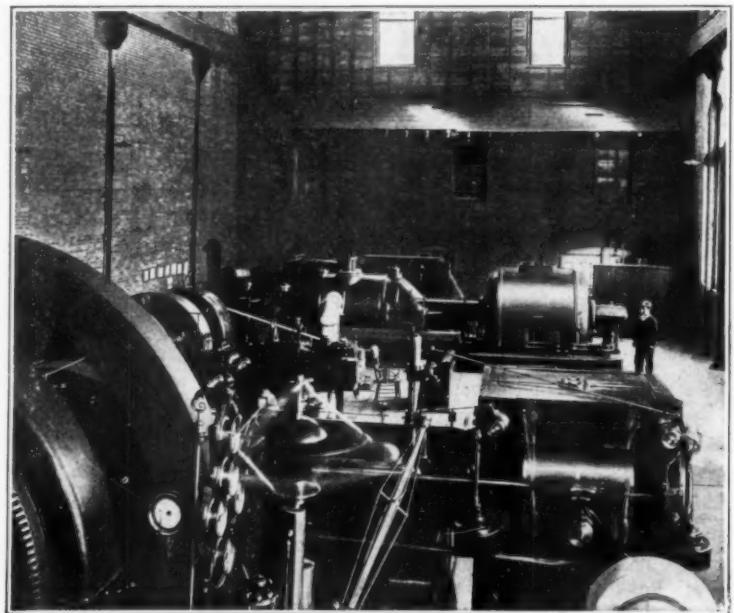
"Directly underneath the front end of the turbine as part of its base is placed an oil-cooling device, which cools the oil that is used for floating the four main bearings of the turbine and generator. This oil is forced into the connections of the bearings by means of a small direct-acting steam pump, which receives its supply in turn from the reservoir of cool oil. This means a positive and satisfactory lubrication.

"The generator in connection with this turbine is a specially-wound 25-cycle two-phase, 220-volt alternating-current generator capable of supplying 2600 amperes per leg of current at the generator.

"The exciting current for the revolving field is 110-volt direct-current, and is taken in through a collector ring at one end of the generator and out through a like collector ring at the other end, the exciting current being supplied by a motor generating set in another part of the power-house.

"This complete turbo-generator unit runs in complete synchronism with an engine-driven alternator of the Crocker-Wheeler make and driven by a cross-compound Hamilton Corliss engine.

"We have never had a question as to the efficiency, operation or economical results of this unit, and its relative efficiency can be appreciated by considering that the entire steam used by the low-pressure turbine previous to its installation was going to waste about the plant and is now turned into useful work."



DIAMOND RUBBER CO.'S ENGINE-ROOM.

"The steam, after leaving the turbine, goes through a Tomlinson specially-designed condenser for handling large quantities of steam and water, and satisfactorily mixing the same. This condenser is placed directly underneath the turbine, and connected to the same by means of an expansion joint. The water from the condenser is taken from a cold well or the canal, and is fed to the condenser through an 18-inch pipe. The pair of 12-inch centrifugal pumps has to supply the lifting force and draw hard enough on the condenser chamber to produce the vacuum, which means they have 40 to 45 feet of

The Board of Trade and the Merchants' Freight Bureau of Little Rock, Ark., by combined effort have inaugurated through freight river transportation between Little Rock and other Arkansas River points and Cincinnati, the service to begin in May.

The American Society of Mechanical Engineers, at its meeting in New York May 9, will listen to a discussion of patents by Messrs. E. W. Marshall, D. Howard Haywood and Edwin J. Prindle of New York.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

"In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned."

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription for the contract period to the Daily Bulletin is included.

BRIDGES, CULVERTS, VIADUCTS

Ala., Dauphin Island.—Dauphin Island Railway & Power Co., T. W. Nicol, chief engineer, Room 3 Bank of Mobile Bldg., Mobile, Ala., will soon complete plans and specifications to construct trestle from Dauphin Island to Cedar Point; steel construction with concrete and creosoted pile foundation; draw with three spans; cost about \$420,000. (Mentioned previously.)

Fla., Sanford.—Orange county will, it is reported, construct bridge at Geneva Ferry. Address County Commissioners, Orlando, Fla.

Ga., Abbeville.—Wilcox county will construct steel bridge over Alapaha River four miles from Rochelle, Ga., on Rochelle and Ashburn Rd.; bids opened May 15; D. D. Faircloth, chairman County Commissioners. (See "Machinery Wanted.")

Ga., Jesup.—Wayne county will vote on issuing \$100,000 of bonds to build bridge across Altamaha River and build roads. Address County Commissioners.

Ky., Louisville.—Grainger & Co. have contract to construct steel superstructure for viaduct and B. C. Milner & Sons (both of Louisville) for concrete substructure.

Ky., Paducah.—Paducah Traction Co. is considering construction of steel and concrete bridge over Island Creek.

Md., Rockville.—Montgomery County Commissioners will construct 60-foot concrete span across Rock Creek in connection with construction of several miles of macadam road. (See "Roads and Streets.")

N. C., Charlotte.—Piedmont Traction Co. and Greenville, Spartanburg & Anderson Railway awarded contract to American Bridge Co., 30 Church St., New York, at about \$150,000 to construct five steel bridges; over Catawba River at Mount Holly, South Fork between Mount Holly and Gastonia, and over Long Creek, all in North Carolina, and over Saluda and Reedy rivers in South Carolina; contract includes only cost of steel and erection of bridges; company contemplates building total of 14 bridges, and awarding of additional contracts is under consideration; reported that steel contracts will aggregate total of \$300,000; W. S. Lee of Charlotte is vice-president of both companies. (Recently mentioned.)

N. C., Wilmington.—New Hanover county will vote May 31 on issuance of \$50,000 of bonds for bridge and road improvements and construction; D. McEachern, chairman County Commissioners.

Tenn., Germantown.—City will vote on \$3000 bond issue for bridge construction, street and sidewalk improvement, etc. Address The Mayor.

Tenn., Ripley.—Lauderdale County Commissioners will erect about 60 steel bridges, replacing structures damaged by floods; W. R. Miller of Ripley; S. M. Roy, Henning, Tenn., and D. H. Cherry, Halls, Tenn., appointed committee to receive bids and award contracts.

Tex., Rockport.—Rockport & Port Aransas Railroad Co., John H. Taylor, general manager, will construct four 50 to 400-foot bridges in connection with railroad to be built between Rockport and tidewater on Harbor Island. (Recently noted to construct two miles of trestle and one steel bridge.)

Va., Penola.—Bids received May 8 at Bowling Green, Va., on erection of concrete bridge across Pole Cat Creek in Caroline county; structure 108 feet, with 12-foot roadway; P. S. J. Wilson, State Highway Commissioner. (See "Machinery Wanted.")

Va., Petersburg.—City will construct four concrete bridges over Lieutenant Run on Bollingbrook, Lombard and Wythe Sts., and bridge over Brickhouse Run at corner of Jones and Wilcox Sts.; street committee recommended bid of Coleman Construction Co., Petersburg, at total cost of \$3000.

W. Va., Dawson.—Greenbrier county will erect bridge across Meadow River; either concrete or concrete and steel construction; bids received until 2 P. M. May 16 by County Court; plans and specifications to be furnished by bidders, who are asked to visit location; for measurements address John E. Dougher, County Road Engineer, Lewisburg, W. Va. (See "Machinery Wanted.")

W. Va., Russellville.—Fayette county will erect reinforced concrete or concrete and steel bridge across Meadow River near mouth of Brackens Creek; plans and specifications to be furnished by bidders, who are requested to visit site; bids will be received until May 16 by J. E. Dougher, County Road Engineer for Fayette county, Lewisburg, W. Va.; Henry A. Gentry, County Road Engineer for Fayette county, may also be addressed. (See "Machinery Wanted.")

CANNING AND PACKING PLANTS

Ala., Mobile.—Alabama Canning Co. contemplates doubling capacity of cannery.

Fla., St. Petersburg.—C. W. Springstead will install orange-packing machinery in warehouse to be erected. (See "Warehouses.")

Miss., Seymour.—Imperial Packing Co. incorporated with \$10,000 capital stock by Peter Quave, Peter Parker, M. Moran and others.

Tex., Cuero.—Cuero Packing Co., A. D. Edson, president (reported incorporated with \$10,000 capital stock), will operate completed plant.

Va., Urbanna.—Farmers' Packing Co. incorporated with \$15,000 capital stock; J. E. Richwine, president; H. S. Chewning, vice-president; W. H. Ryland, secretary; L. N. Weaver, treasurer.

CLAYWORKING PLANTS

Ala., Sulligent.—Bricks.—Company organized with A. U. Hollis, president and general manager; J. T. Dunn, secretary, and J. R. Craig, treasurer, to establish brick plant; purchased mill with daily capacity of 20,000 to 30,000 bricks.

Ga., Dalton.—Brick.—W. L. Sanderson, By-

halla, Miss., is considering establishment of brick plant.

Ga., Macon.—Sewer Pipe.—Bibb Sewer Pipe Co. will erect plant for manufacturing sewer pipe; one building will be four stories and cover one acre, and in addition will be kilns for drying pipe, etc.; cost about \$100,000; contract for erection of buildings awarded to Shaw Bros. Company, W. J. Massee, president; O. J. Massee, vice-president; J. Pate Stetson, secretary. (Recently reported incorporated by J. O. Massee, Jr., and others.)

Mo., Kansas City.—Lafayette Coal & Brick Co. incorporated by Homer P. Allen and others. (See "Coal Mines and Coke Ovens.")

COAL MINES AND COKE OVENS

Ala., Birmingham.—Gallacher Coal Co. incorporated with \$25,000 capital stock; James Gallacher, president; H. L. Morrow, secretary-treasurer.

Ala., Bridgeport.—Pierce Coal & Lumber Co. incorporated with \$10,000 capital stock.

Mo., Kansas City.—Lafayette Coal & Brick Co. incorporated with \$150,000 capital stock by Homer P. Allen, S. E. Snyder and J. E. Wilson.

Ky., Providence.—Luton Coal Co. organized by R. W. Hunter, J. E. Morgan and S. K. Luton; secured option on 500 acres of coal land.

Tex., Sutherland Springs.—Calloway Coal & Sand Co. incorporated with \$24,000 capital stock by W. P. Calloway, Harry J. Hatch and Charles B. Hatch.

Va., St. Paul.—Clinchfield Coal Corporation, Spartanburg, S. C., will open shaft mine; shaft to be 125 feet in depth, with companion arlway to same level; both are to be concrete lined; mine equipment to include hoisting engines and electric haulage; Dravo Contracting Co., Pittsburgh, Pa., has contract.

W. Va., Charleston.—Eagle Collieries Co. acquired from West Virginia Coal Land Co. 2500 acres coal lands recently mentioned; will operate; Eagle Collieries Co. was previously noted to be organized with J. W. Dawson of Charleston, president. (See W. Va., Charleston, West Virginia Coal Land Co.)

W. Va., Charleston.—Bedford Land Co. acquired 6000 acres coal lands from West Virginia Coal Land Co., Charleston. (See W. Va., Charleston, West Virginia Coal Land Co.)

W. Va., Charleston.—Harrison Smith, president West Virginia Coal Land Co., advises Manufacturers Record further as follows: Relative to recently noted coal lands purchase of 27,000 acres upon Paint Creek, Cabin Creek and waters of Coal River, 13,000 acres were under lease to other companies; since purchase disposition of property includes: To Christian Collieries Co., 2000 acres on Paint Creek; Millburn Land Co., 3000 acres on Paint Creek; Eagle Collieries Co., 2500 acres new territory, which will be operated.

W. Va., Piedmont.—Pine Swamp Big Vein Coal Co. incorporated with \$900,000 capital stock by Louis P. Winston, 1529 John St.; Joshua L. Craig (of Craig & Co.), 19 E. Saratoga St., and others, all of Baltimore, Md.

CONCRETE AND CEMENT PLANTS

Ala., Bay Minette.—Bay Minette Concrete Co., Frank B. Wilhart, manager, is reported to install concrete-brick machine.

Ky., Louisville.—Tycrete Concrete Products Co. is completing arrangements for erection of proposed plant; secured permit for foundation of building; structure to be of concrete and cost about \$6000. (Lately mentioned.)

N. C., Wilmington.—J. C. Herring of Piedmont Concrete Co., Charlotte, N. C., will establish plant to manufacture concrete products, including blocks, vaults, sewer pipes, finishing brick, etc.

Tenn., Limestone.—N. A. Morelock is considering, it is reported, establishment of cement mill; equipment will include crushers, grinders, burners, etc.

COTTON COMPRESSES AND GINS

Ala., Lineville.—Farmers' Gin Co. incorporated with \$8000 capital stock.

Ga., Hartsfield.—C. M. Dewberry will erect cotton gin; machinery purchased.

La., Bunkie.—W. D. Haas & Co. will erect cotton gin; single, three-stand gin, with daily capacity of 40 bales; construction of building under supervision of Alfred Depuy; contract for machinery awarded.

Okla., Red Ford.—Red Ford Gin & Milling Co. incorporated with \$4000 capital stock by O. C. Brooks, R. M. Brown and George Sawyer.

Okla., Stroud.—Stroud Custom Gin Co. incorporated with \$10,000 capital stock by C. C. Epps, J. E. Sullivan, O. E. Greelan, Oscar Presson and C. E. Hildebrand.

S. C., Edgefield.—Beaver Dam Mills, Lewis W. Parker, president, Greenville, S. C., will double capacity of cotton gin.

Tex., Bay City.—Jim Rugeley will erect cotton gin; will have storage-room for about 100 bales of seed cotton; estimated cost \$3000.

Tex., Georgetown.—J. L. Vought is interested in erection of \$7500 cotton gin.

Tex., Harlingen.—Harlingen Compress Co. incorporated with \$35,000 capital stock by A. B. Slack, L. T. Hubbell and W. Weatherford.

Tex., Midway.—William Harbenck will erect cotton gin; capacity 50 bales of cotton daily; cost about \$1000.

Tex., Walsh.—Farmers' Union Gin Co. organized with \$3000 capital stock by W. G. May, W. H. Cardwell, Sam Lester and others.

Va., Chase City.—Ice Plant, Fuel & Ginning Co. organized with \$8000 capital stock. (See "Ice and Cold-storage Plants.")

DRAINAGE AND IRRIGATION

Mo., Carrollton.—Drainage District No. 3 of Carroll county will expend approximately \$187,000 on construction of canal 21 miles long; 77,000 acres of land in drainage district; Brooke & Jacoby, civil engineers, 515 Shukert Bldg., Kansas City, Mo.; as previously stated, bids will be received May 15.

Mo., Kirksville.—C. J. McElhaney, Coln, Ia., has contract to construct drainage canal seven miles long, extending from boundary line of Adair county to Novinger, Mo.; canal is to be 10 feet deep, draining 7000 acres of bottom land and disposing of surplus water caused by overflow of Charlton River.

Okla., Enid.—Plumas Tunnel & Drainage Co. organized with C. G. Smith, president, Aspen, Okla.; J. D. Perkins, vice-president; H. W. Herndon, secretary-treasurer, both of Enid.

Tex., Arcadia.—Galveston County Drainage District No. 1, R. H. Bushway, chairman, Alton, Tex., will receive bids until May 30 for construction of laterals opening La Flores Bayou and Willow Bayou, excavating about 100,000 cubic yards of earth; bids opened May 30. (See "Machinery Wanted.")

Tex., Caldwell.—Burleson County Commissioners contemplate organization of Drainage District No. 2; district will vote on \$4215 bond issue.

Tex., Del Rio.—D. B. Chapin of Chapin, Tex.; David R. Francis of St. Louis, Mo., and associates are, it is reported, completing plans to irrigate 200,000 acres land near Del Rio; plans said to contemplate construction of dam across Devil's River for irrigation and to develop 10,000 horse-power for transmission by electricity for light and power. Mr. Francis telegraphs the Manufacturers Record as follows: "Am not interested in any Devil River irrigation project. Don't know that shall be. Suggestion only submitted. Don't know that will consider."

Tex., Grand Falls—Irrigation.—Consolidated Mutual Reservoir Co. (recently noted incorporated with \$900,000 capital stock) is consolidation of Grand Falls Mutual Irrigation Co., Big Valley Irrigation Co. and Grand Falls Lake & Reservoir Co.; will continue operations begun by absorbed companies; reported contracts will be awarded for construction of three large impounding reservoirs, to cost above \$250,000, and requiring handling of more than 700,000 cubic yards of earth; enlarge main canals and construct 50 miles new canals; will irrigate, at start, above 20,000 acres; reservoir surveys have been completed and specifications prepared; officers are M. T. Endalym, formerly of Indiana; H. E. Moore, treasurer; M. L. Swinehart, secretary.

Tex., Nome.—George White, Jefferson county surveyor, Beaumont, Tex., has made survey of eight-foot drainage ditch to lead from

vicinity of Nome southwest four and a half miles and to empty into Cotton Creek.

ELECTRIC LIGHT AND POWER

Ala., Montgomery.—Richard Tills, care of "Citizens' Light, Heat & Power Co., purchased four acres land at North Montgomery for construction of compound condensing steam turbine plant; has contracted for two 2000-kilowatt steam turbines of 3000-kilowatt maximum rating, rotary converters, switchboard, eight 400-horse-power boilers, etc. (Lately mentioned.)

Ala., Montgomery.—Montgomery Light & Water Power Co. (controlled by Doherty Operating Co., H. W. Scott, general manager, 60 Wall St., New York), placed order for 1000-kilowatt turbine, and will also install jet type condenser; cost about \$25,000.

Ark., Imboden.—George Dutton purchased from People's Bank electric light and water-works system; contemplates extension and remodeling.

Fla., St. Petersburg.—J. J. Farnsworth, Fort Lauderdale, Fla., is interested, it is reported, in erection of electric-light plant; system to extend from St. Petersburg to John's Pass, seven miles.

Fla., West Palm Beach.—Ariston Ice & Electric Co. contemplates installation of additional machinery at cost of \$15,000; will petition City Council for new franchise; William W. Corlett of New York is attorney for Jefferson estate, owner of plan.

Ga., Oglethorpe.—City voted \$18,000 of bonds to construct electric-light plant and water-works; bids opened about July 1; J. P. Nelson, Mayor. (Recently mentioned.)

Ky., Liberty.—Herren & Cundiff contemplate erection of electric-light plant.

La., New Orleans.—United Public Utilities Co. formed with \$1,257,600 capital stock by Lynn H. Dinkins, Silas L. Hyman, Max Schwabacher and others.

La., Shreveport.—City has selected Anderson Offutt, electrical engineer, New Orleans, La., to make investigation and estimate cost of constructing electric-light plant. (Recently mentioned.)

Md., Baltimore.—Susquehanna Transmission Co., Continental Bldg., Baltimore and Calvert Sts., filed petition with Public Service Commission for permission to issue 5 per cent. bonds for \$1,131,000; has expended to April 1 \$935,106.31 for construction of lines 32 miles long for transmitting electricity to Baltimore from McCall's Ferry (Pa.) water-power-electrical development of Pennsylvania Water & Power Co., main offices in New York; additional construction required will increase cost to \$1,131,000. (Extent and character of construction heretofore detailed.)

Miss., Tupelo.—City will make improvements to electric-light plant and install machinery to cost \$20,000; Mayor and Board of Aldermen to consider bids May 2; C. E. Goodlet, clerk. (Recently noted to vote \$50,000 bond issue for improvements to electric-light plant, paving and erection of city hall.)

Mo., Columbia.—City will receive bids until May 16 on proposed power plant, plans and specifications for which are on file at office of City Clerk, John S. Bicknell; bids to be opened in presence of City Council at first regular meeting after May 16. (See "Machinery Wanted.")

Mo., Moberly.—Randolph County Gas & Electric Co. incorporated with \$100,000 capital stock by Thomas F. Fulkerson, Walter C. Duncan and James T. Meneefee.

Mo., St. Louis.—Zwolle Light, Ice & Power Co. incorporated with \$25,000 capital stock by William D. Stock, John W. Stock and James A. Steele.

N. C., Raleigh.—Yadkin River Power Co., Chas. E. Johnson, president, is planning construction of proposed transformer station and storage-house. (Other facts of extensive developments details lately under Rockingham, N. C.)

N. C., Rockingham.—Yadkin River Power Co., Charles E. Johnson, president, Raleigh, N. C., awarded contract to F. W. Abbott & Co., New York, for continuing and completing construction of water-power-electrical plant to develop 40,000 horse-power for transmission by electricity; plant heretofore under construction by Rockingham Power Co. (Other details recently mentioned.)

N. C., Wilmington.—Tidewater Power Co. will install additional machinery, including 400-horse-power boiler, gas-plant improvements, etc.

Ola., Ardmore.—A. E. Perry, Coalgate, Okla., recently noted (incorrectly as Ed S. Perry) interested in construction of plant, states as follows: Washita Electric Power Co., operating at Pauls Valley, owns power site 17 miles from Ardmore, and is consider-

ing erection of plant in the fall or next spring; will not build plant at present.

Ola., Sentinel.—City voted \$12,000 of bonds to construct electric-light plant; J. M. Terry, Town Clerk; T. Murch, engineer, Clinton, Okla.

Ola., Skiatook.—City voted bond issue for electric-light plant. Address The Mayor.

Ola., Tulsa.—Charles Page will build plant developing 300 horse-power for transmission by electricity; construction begun and in charge of Clarence Tingley.

Ola., Weleetka.—City voted \$45,000 bond issue for electric-light plant and water-works. Address The Mayor.

S. C., Edgefield.—City will vote May 18 on \$15,000 bond issue for electric-light plant. Address The Mayor.

Tenn., Lexington.—City contemplates construction of electric-light plant and water-works system; has authority of Legislature to issue \$10,000 of bonds; C. G. Gathings, Mayor.

Tex., El Paso.—El Paso Electric Railway Co. secured permit for erection of addition to power station; new building will be 120x58 feet and 75 feet high, of steel and brick; cost \$83,290; machinery, consisting of turbines, boilers, generators, etc., will be installed at cost of \$62,350, making total expenditure \$145,640.

Tex., Fort Stockton.—W. M. Grant, Cleveland, O., will construct electric-light plant.

Tex., Floresville.—A. B. Crawford, San Antonio, Tex., contemplates installing electric-light plant.

Va., Newport News.—City will vote June 24 on issuance of \$150,000 of bonds for construction of electric-light plant; Maryus Jones, Mayor. (Recently mentioned.)

Va., Falls Church.—Arlington Electric Co., M. E. Church, president, is proceeding with plans for conveying electricity for light, heat and power in Alexandria and Fairfax counties; probably cover territory seven miles long by one-half to two miles wide; incorporated with \$200,000 capital stock; recently noted under Falls Church and Clarendon, Va. (See "Machinery Wanted.")

Va., Narrows.—Narrows Electric Light & Power Co. incorporated with \$5000 capital stock; H. W. Hale, president; George L. Bane, vice-president; H. C. Johnson, secretary; B. T. Johnson, Jr., treasurer.

Va., Richmond.—Federal Electric Utilities Corporation chartered with \$6,000,000 capital stock and offices in Mutual Bldg.; president, M. Gregg Latimer; vice-president, Dennis K. Keller; secretary, John B. Marsh, all of New York; additional construction required will increase cost to \$1,131,000. (Extent and character of construction heretofore detailed.)

Va., Richmond.—Virginia Railway & Power Co., Geo. H. Whitfield, general superintendent, is progressing with construction of electrical transmission line between Appomattox power-house and Richmond; has not considered plans for further utilizing water-power of Appomattox River and extending lines to other cities. (Previously mentioned.)

W. Va., Wheeling.—Wheeling Electric Co. awarded contract to Dravo Contracting Co., Pittsburgh, Pa., for construction of electric plant; cost from \$700,000 to \$900,000. (Lately mentioned.)

FERTILIZER FACTORIES

Ga., Hawkinsville.—Company organized with \$50,000 capital stock by W. H. Cotter of Hawkinsville, A. W. Walker, McRae, Ga.; M. H. Edwards, Eastman, Ga., and others; will establish fertilizer plant with capacity of 100,000 tons.

Ga., Pelham.—Pelham Phosphate Co. is proceeding with construction of proposed acid plant; capacity for first year is to be 15,000 tons, which it is planned to double following year.

Ga., Savannah.—Mutual Fertilizer Co. will make improvements to plant; E. W. Reel is superintendent.

Ga., Union City.—Union Phosphate Co. of Georgia, J. G. Eubanks, president, will increase main building to 70x300 feet at cost of \$25,000; now opening building-enlargement proposals; daily capacity 100 tons acid phosphate; capital stock \$150,000. (Recently noted to enlarge plant.)

FLOUR, FEED AND MEAL MILLS

N. C., Smithfield.—Austin-Heaton Company, Durham, N. C., purchased Smithfield Roller Mills and will increase capacity from 80 barrels to 150 barrels flour daily.

Tenn., Cookeville.—Cookeville Roller Mill will increase capacity to 100 barrels flour daily.

Tenn., Texarkana.—Land Milling Co., Neodesha, Kans., will establish branch flour mill; cost about \$30,000.

FOUNDRY AND MACHINE PLANTS

Ga., Valdosta.—Turpentine Stills, etc.—Valdosta Copper Co. incorporated with \$5000 capital stock by L. Smith, W. N. Holcomb and others to manufacture turpentine stills, etc.

Ky., Louisville.—Malleable Iron.—John C. Haswell, president Marion Malleable Iron Works, Marion, Ind., will, it is reported, establish malleable iron works to cost about \$100,000.

Md., Baltimore.—Iron Works.—Arundel Iron Works incorporated with \$25,000 capital stock by John J. Doody, 120 Harford Ave.; Charles G. Roche and Julia A. Doody.

Md., Baltimore.—Gas Engines.—Middleton & Meads Gas Engine Co. incorporated with \$500 capital stock by Arthur R. Middleton, Benjamin G. Middleton and Joseph K. Meads.

Md., Hagerstown.—Boilers, etc.—New York Central Iron Works Co., C. E. Williams, secretary, Geneva, N. Y., purchased 15 acres as site for plant; will erect building, 24 feet long, with two wings, each 80 feet long; concrete, glass and steel. (Recently mentioned.)

Miss., Greenville.—Tin, Sheet Iron, etc.—Barrington-Barnes Company incorporated with \$5000 capital stock by John F. Barrington, J. L. Reid and Frank Barnes.

Mo., Kansas City.—Interstate Foundry Co. incorporated with \$2000 capital stock by James H. Bodley, Alfred L. Block and Adolph Block.

Mo., St. Louis.—Vending Machines.—American Presto Vending Machine Co. incorporated with \$100,000 capital stock by William H. Palmer, Joseph Laeckner and J. W. George.

Mo., St. James.—James Gray, Red Bird Mo., will erect mill with daily capacity of 50 barrels flour.

Mo., St. Joseph.—King Foundry Co. incorporated with \$15,000 capital stock by Oliver M. King, David E. Heaton and Lewis Siegel.

Mo., St. Louis.—Structural Steel.—Hempstead Structural Steel Co. incorporated with \$15,000 capital stock to fabricate structural steel; awarded contract for erection of building 75x14 feet; E. A. Belnke is president; F. L. Belnke, vice-president; Ernest J. Moser, secretary-treasurer; Offices, 724 Roe Bldg.

Okla., Muskogee.—Stoves.—Oklahoma Stove & Range Co. incorporated with \$50,000 capital stock by G. D. McDaniel, W. T. Amis and J. S. Amis of Muskogee, and D. J. McDaniel of Columbus, O.

Okla., Tulsa.—Plows.—Carnegie Plow & Manufacturing Co., Carnegie, Pa., will build plant.

S. C., Spartanburg.—Gasoline Engines.—Southern Gasoline Engine Co. incorporated with \$15,000 capital stock by W. D. Wilcox of Spartanburg and W. E. Glenn and William F. Robertson, Charlotte, N. C.

Tenn., Mt. Pleasant.—Repair Shop.—Mt. Pleasant Auto & Machine Co. (recently reported incorporated with \$5000 capital stock under "Miscellaneous Enterprises") will erect 50x100-foot building; practically fireproof construction; cost \$2000; bids opened May 1; cost of machinery to be installed \$3000; Ernest Irwin, president; J. P. Warnack, secretary-treasurer and manager. (See "Machinery Wanted.")

Va., Emporia.—Plows, etc.—Emporia Machine Co. will erect two additional stories to building; install five new motors and use electricity furnished from Emporia Hydro-Electric Power Co.'s plant on Meherrin River.

GAS AND OIL DEVELOPMENTS

Ark., Little Rock.—Natural Gas Supply Co. incorporated with \$25,000 capital stock by W. M. Kavanaugh, C. H. Duttlinger and E. C. Campbell; Mr. Kavanaugh is president.

Ky., Wayne County.—P. F. Sions, Moorefield, W. Va., and others are drilling oil well, and contemplate several additional wells. (See "Machinery Wanted.")

Md., Oakland.—Oakland Dairy Association will erect ice plant to have daily capacity of about six tons; will erect 36x36-foot one-story concrete-and-wood structure; plant to cost \$6000; contracts placed.

Mo., St. Louis.—Mocal Oil Co. incorporated with \$300,000 capital stock by William H. Kelley, Herman J. Bromeyer, Ollie F. Kelker, George J. Tamm, Jr., and others.

Okla., Enid.—City voted \$15,000 bond issue to bore for oil and gas. Address The Mayor. (Recently mentioned.)

Okla., Mulhall.—Mulhall Oil & Gas Co. incorporated with \$50,000 capital stock by L. K.

Meek, R. W. Kincaid, A. J. Donahoe, H. Chapman, W. D. Shultz and others.

Okla., Muskogee.—Merchants Oil Co. incorporated with \$60,000 capital stock by Charles G. Madison, Carl Purcell and Frank Warren.

Okla., Muskogee.—Dallas Queen Oil Co. incorporated with \$10,000 capital stock by A. M. Gamman, Chelsea, Okla.; S. D. Felt, Tulsa, Okla.; G. M. Ransom, Muskogee, and others.

Okla., Oklahoma City.—Mocasin Oil Co. incorporated with \$50,000 capital stock by A. O. Campbell, Lincoln, Neb.; Frank J. Kern and S. A. Layton of Oklahoma City.

Okla., Sapulpa.—Eliza Tim Oil Co. incorporated with \$6000 capital stock by Oren M. Ireland, James M. Ricks, Ernest B. Hughes and Louis Schmidt.

Okla., Tulsa.—Line Oil & Gas Co. incorporated with \$5000 capital stock by Earl L. Lins, Sapulpa, Okla.; F. S. Foster, Wagoner, Okla., and L. L. Hutchinson and Charles Cartmell of Tulsa.

Okla., Tulsa.—Eline Oil & Gas Co. incorporated with \$5000 capital stock by E. R. Perry, Marion Dickerman and R. E. Swearingen.

Okla., Tulsa.—Shallow Sand Oil Co. incorporated with \$10,000 capital stock by Frederick A. Fulgham, Robert Jordan and Mamie Jordan.

Okla., Vian.—Vian Oil & Gas Co. incorporated with \$250 capital stock by R. F. Allen, J. M. Brockman, G. R. Scott, T. J. Keener, D. S. Coleman and A. J. Kennedy.

Tenn., Tiptonville.—Lake City Manufacturing Co. awarded contract to Clifford Wells Co., Texarkana, Ark., to drill six-inch gas well. (See "Machinery Wanted.")

Tex., Fort Stockton.—W. M. Grant, Cleveland, O., will construct ice plant.

Tex., Longview.—Texas-Caddo Land & Oil Co. incorporated with \$10,000 capital stock by R. Lacey, J. L. Everett, E. H. Bussey and H. A. Williams.

W. Va., Charleston.—Davis Oil Co. incorporated with \$50,000 capital stock by G. O. Chilton, J. E. Chilton, W. G. MacCorkle, John A. Thayer and Joe N. Kenna.

W. Va., Hutchinson.—National Oil & Gas Co. incorporated with \$25,000 capital stock by Ray Ismer, C. W. Vance, C. A. Freeland and N. F. Manean, all of Hutchinson, and John N. Wood, Worthington, W. Va.; will first develop 40 acres land owned by company; contemplates leasing additional land; will hold organization meeting May 15. (See "Machinery Wanted.")

ICE AND COLD-STORAGE PLANTS

Fla., Bartow.—C. W. Brown will install five-ton ice plant.

Fla., West Palm Beach.—Ariston Ice & Electric Co. contemplates installing additional machinery at cost of about \$15,000 (See "Electric Light and Power.")

Mo., Kansas City.—Grocers' Ice & Cold Storage Co. organized with John F. Werdemann president, Aaron Little vice-president, W. F. Lyons secretary and manager, David McDonnell treasurer; awarded contract to John T. Well to erect 60x142-foot building; cost \$10,000; cost of machinery, \$28,000; daily capacity, 60 tons of ice. (Recently reported incorporated with \$13,200 capital stock.)

Mo., St. Louis.—Zwolle Light, Ice & Power Co. incorporated with \$25,000 capital stock by William D. Stock and others. (See "Electric Light and Power Plants.")

Okla., Thomas.—Crystal Ice Co. will operate plant of 15 tons capacity; Carl Weiner, president; Chas. F. Smith, vice-president; L. K. Jones, secretary-treasurer. (Recently noted incorporated with \$20,000 capital stock.)

S. C., Jefferson.—Jefferson Ice & Bottling Co. incorporated with \$5000 capital stock; R. W. Shannon, president; M. I. Krowscheck, vice-president and secretary.

Va., Chase City.—Ice Plant, Fuel & Ginning Co. organized with \$8000 capital stock to manufacture ice, operate 70-saw suction cotton gin with capacity of from 15 to 20 bales of cotton daily, etc.

W. Va., Berkeley Springs.—Morgan County Cold Storage Co. incorporated with \$100,000 capital stock by F. W. Bartlett, E. S. Easton, Henry D. Hinkman and R. D. Mead, all of Farmington, W. Va., and H. W. Showalter, Fairmont, W. Va.

LAND DEVELOPMENTS

Ala., Birmingham.—Tiddlesville Heights Land Co. incorporated with \$2000 capital stock; J. Alfred Levert, president; Florence E. Jordan, vice-president; Mortimer H. Jordan, secretary; J. A. Levert, treasurer.

Ala., Mobile.—Mechem-Britain Cemetery Co. incorporated with \$16,000 capital stock.

Ala., Mobile.—National Land & Orchard Co. incorporated with \$100,000 capital stock by G. B. Hengen, Chicago, Ill.; J. M. Rodgers, Sr., and R. E. Irwin, Des Moines, Ia.

Fla., Miami.—Dr. Holmberg of Miami, J. A. Swenson and A. W. Dibble, Madison, Wis., purchased 70 acres and will improve, probably as residence park.

Fla., Fellsmere (not a postoffice).—Fellsmere Farms Co. is proceeding with development (by drainage system) of 115,000 acres of land covering townships in Brevard and St. Lucie counties near Sebastian, on Florida East Coast Railway; contemplates having land ready for market soon; tracts to be sold by Security Underwriters' Association, 229 Scarritt Bldg., Kansas City, Mo.; officers of Fellsmere Farms Co. are Oscar T. Crosby, Warrington, Va., president; E. Nelson Fell, vice-president; Ernest H. Every of Sebastian, Fla., manager; cost of drainage system, about \$1,000,000; as previously stated, J. G. White & Co., 43 Exchange Place, New York, are engineers and contractors.

Ga., Abbeville.—Georgia-Carolina Land Co. incorporated with \$50,000 capital stock by G. O. Shackelford, C. F. Chapman, S. L. Ryals, J. B. Girardeau and others.

Ga., Atlanta.—Tuxedo Park Co. Incorporated with \$75,000 capital stock by Charles H. Black, Austell Thornton, Andrew Calhoun, D. C. Lyle (latter of College Park, Ga.) and others; purchased 516 acres near Atlanta for about \$150,000, and will develop suburb—Tuxedo Park; improvements proposed are to include construction of drives, electric light and power plant, etc.

Md., Baltimore.—Messerschmidt & Kohlstedt, 622 Law Bldg., purchased 47 acres near Woodhome Heights on Harford Rd., and will develop suburb to be known as Linden Heights; will expend \$5000 to \$8000 to construct roads and sewer system.

Md., Branchville.—Castalia Springs Water Co. incorporated with \$150,000 capital stock by Witold de Zychlinski, Berwyn, Md.; Evelyn Taylor Yorke and William J. Oldaker, Washington, D. C.

Miss., Grenada.—Grenada County Land Improvement & Mercantile Co. Incorporated with \$25,000 capital stock by J. H. Clay, Peter Carew, J. T. Towns and others.

Miss., Greenwood.—Yazoo & Mississippi Valley Cotton Co. Incorporated with \$100,000 capital stock; S. F. Jones of Greenwood, president; M. P. Sturdivant, vice-president, Glendora, Miss.; B. B. Provine of Greenwood, manager.

Miss., Hattiesburg.—Mississippi Colonization Association chartered with \$250,000 capital stock by Willis S. Thompson, Leon Shearer and James M. Sullivan of Chicago, Ill.; plans colonization of 5,000,000 acres over pine lands in Southern Mississippi. (Recently mentioned.)

Miss., Jackson.—Farming.—Southern Plantation Co. incorporated with \$25,000 capital stock by Otis Robertson, Jackson; F. W. Stevens, Pittsburgh, Pa., and J. H. Junghans, Washington, D. C.

Miss., Natchez.—Pelican Planting & Manufacturing Co. incorporated with \$10,000 capital stock by James M. Coan, A. V. Davis and S. V. Stratton.

Miss., Scott.—Lake Vista Planting Co. and Triumph Plantation Co. are titles of two \$1,500,000 corporations lately reported organized to develop 32,000 acres cotton land; L. R. Salsbury will be president, with offices in Central Bank Bldg., Memphis, Tenn.; will expend large amount for draining and generally improving land; erect cotton gin, compress and oil mill; expect to grow 25,000 bales cotton annually; bonds issued by companies guaranteed by Fine Cotton Spinners of Manchester, England.

Mo., St. Louis.—Commonwealth Farm Land Co. incorporated with \$100,000 capital stock by Albert N. Edwards, W. C. Fordyce, J. M. Woods, J. D. Dana and Charles Campbell.

Okla., Enid.—City voted \$10,000 bond issue for park improvements. Address The Mayor (Recently mentioned.)

S. C., Charleston.—R. L. Montague, 53 Broad St., contemplates organization of company to develop about 8000 acres recently acquired cut-over pine land; will drain land and build roads; engineers now making plans; correspondence with contractors desired. (See "Machinery Wanted.")

S. C., Greenwood.—Greenwood Fruit Co. Incorporated with \$10,000 capital stock; T. St. John Goodwin, president; E. M. DuPre, vice-president; J. W. Bradford, secretary-treasurer.

Tex., Pecos.—Toyah Valley Grape & Alfalfa Co. Incorporated with \$36,400 capital stock by H. A. Boaz, George Mulkey, W. A. Johnson and others.

Mo., St. Joseph.—Munger Land Co. Incorporated with \$50,000 capital stock by Willis R. Munger, James Burgess and Beal Hurtsin.

Tenn., Johnson City.—Watnuga Fruit Co. organized by W. A. Starritt, J. C. Stone, J. S. Gillespie, S. B. Yaught and J. M. Ferguson; has secured 50 to 60 acres about one mile from Johnson City and will plant fruit orchards.

Va., Richmond.—College View Land Corporation incorporated with \$30,000 capital stock; L. Shere, president; Paul Well, vice-president; E. Hawse Lipscomb, secretary-treasurer.

Va., Richmond.—Forest View Land Co. incorporated with \$20,000 capital stock; A. J. Daffron, president; J. G. Farland, vice-president; W. E. DuVal, secretary; H. R. Taylor, treasurer; will develop 121 acres as suburban residential section, dividing property into lots, constructing streets, etc. (Recently mentioned.)

W. Va., Keyser.—Fairview Fruit Co. incorporated with \$25,000 capital stock by H. L. Arnold, T. T. Huffman and D. F. Huffman, all of Keyser; Burke Randalls and T. A. Devine, Beryl, W. Va.

LUMBER MANUFACTURING

Ala., Pelahatchie.—Jones-Borherty Lumber Co. incorporated with \$10,000 capital stock by R. R. Jones, Tally Heslip and others.

Ala., Bridgeport.—Pierce Coal & Lumber Co. incorporated with \$10,000 capital stock.

Fla., Bartow.—C. W. Brown will erect sawmill; machinery being installed.

Fla., Rodman.—Rodman Lumber Co., H. S. Cummings, president, advises Manufacturers Record that contracts were awarded to Chattanooga Machinery Co., Chattanooga, Tenn., for machinery and installation, and to Converse Bridge Co. of Chattanooga for steel and erection of building for mill; 10-hour capacity, 100,000 feet lumber; electric lighting; fuelroom to be of brick, 24x30 feet, with concrete roof; cost of plant, including boilers, \$65,000; boilers contract let to Casey-Hedges Company, Chattanooga; construction includes reinforced concrete vat for wet logs. (Other facts recently noted.)

Fla., Taylorville.—Edge-Dowling Lumber Co. telegraphs Manufacturers Record it will rebuild sawmill, planing mill and drykiln reported burned at loss of \$100,000.

Fla., Wauchula.—J. A. Williams will erect sawmill.

Ga., Macon.—Chambers Lumber Co. incorporated with \$10,000 capital stock by Avner Chambers, J. W. McCook and others.

Ga., Valdosta.—Empire Land & Timber Co. incorporated with \$5000 capital stock by C. M. U. Young, H. W. Dexter and J. C. Wilson.

Ky., Eddyville.—N. L. Chrisman, Louisville, Ky., purchased 400 acres of timber land from Harmon Land & Iron Co. for \$8500; will manufacture timber into cooperage stock and crossties.

Ky., Eddyville.—N. L. Chrisman purchased 400 acres timber land for \$8500; will remove mill to site for cutting heading and crossties.

La., Rayville.—Green Bros., Bardel, La., purchased Gillette & Johnson mill; will install two band saws, increasing capacity from 20,000 to 50,000 feet per day.

La., Bowie.—Bowie Lumber Co. incorporated with \$2,150,000 capital stock by Robert H. Downman, Frederick H. Lewis, William E. Howell and others.

N. C., Goldsboro.—Virginia Lumber & Box Co., Wm. L. Nafer, president, Petersburg, Va., contemplates development of timber holdings near Goldsboro; plans are not matured.

N. C., Rosman.—Gloucester Lumber Co., with principal office at Rosman, will erect land sawmill to develop 20,000 acres timber recently purchased by company's president, Jos. S. Silverstein of Asheville, N. C.; A. D. Undergraff, vice-president, Williamport, Pa.; N. S. Brittan, secretary-treasurer, Stroudsburg, Pa.; company will let contracts for building of standard-gauge railroad from Rosman to timber tract, erection of band mill, etc.; contemplates later erection of tannic acid plant and pulp mill. (See "Machinery Wanted.")

S. C., Anderson.—Martin-Vandiver Lumber Co. incorporated with \$25,000 capital stock by F. J. Martin and D. S. Vandiver.

Tex., Bon Wier.—Mortimer Lumber Co. incorporated with \$10,000 capital stock by W. C. Mortimer, N. N. Carey and George D. Anderson.

Tex., Newton County.—Allardice-McMahon Timber Co. organized with \$10,000 capital stock to develop the timber land along Sabine River; S. B. Allardice, president; R. D. Cain, vice-president; J. S. Peters, secretary-treasurer; J. P. McMahon, Jr., general manager; G. C. Morris, general superintendent;

Mr. Peters is cashier New County Bank, Newton, Tex.; main office in Beaumont, Tex. Tex., Stamford.—Stamford Planing Mill will increase capacity of plant.

Va., Waverly.—M. B. Carpenter Planing Mill has purchased canning factory and will open bids first week in May for remodelling building; mill construction; cost \$1200; cost of machinery, \$1500.

W. Va., Clarksburg.—Clarksburg Planing Mill Co. will rebuild planing mill burned at loss of about \$65,000.

METAL-WORKING PLANTS

W. Va., Wheeling.—Cans.—Johnson-Morse Can Co., Oliver J. Johnson, president, has let building contracts; will install present machinery. (Previously noted Incorporated with \$1,000,000 capital stock, and to acquire and improve plant of Wheeling Can Co.)

MINING

Ala., Paint Rock.—J. A. Beeson is considering development of iron-ore deposits.

Mo., Joplin.—Lead and Zinc.—N. W. Durham and J. N. Howerton will, it is reported, probably develop lead and zinc deposits on property owned by Bud M. Robinson.

Mo., Joplin.—Arthur S. Growdon secured mining lease from East Side Mining Co.

N. C., Newbern—Marl, Limestone, etc.—Carolina Coast Lime Co. Incorporated with \$100,000 capital stock by J. Councill Brown, James A. Bryan, George H. Roberts and C. W. Munger.

Okla., Oklahoma City.—Mineral Development Co. Incorporated with \$5000 capital stock by Ralph W. Day, R. M. White, J. R. Thomas, C. F. Town and R. N. Cunningham.

Va., Petersburg.—Carolina Mineral Corporation Incorporated with \$50,000 capital stock; William E. Dildrell, president; E. F. Atwood, vice-president and treasurer; D. H. Jackson, secretary.

Va., Rocky Mount—Mica.—W. S. Morrison, Danville, Va., and others have acquired mica property near Rocky Mount; will develop; will not yet ready with specifications. Address G. B. Robertson, Box 161, Danville, Va. (Recently noted.)

MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Bulkhead.—Government will construct 1150 feet of creosoted timber bulkhead; bids opened May 27; C. A. F. Flagler, major engineer, United States Engineer Office. (See "Machinery Wanted.")

La., Houma.—R. R. Barrow awarded contract to E. F. Morgan to dredge Barataria Canal from Bayou Terrebonne to Bayou Black; width of canal, 40 feet; depth, 6 feet medium low-tide water.

La., New Orleans.—Wharf.—Board of Commissioners, Port of New Orleans, Hugh McCloskey, president, Suite 200 New Orleans Court Bldg., will receive bids until 7:30 P. M. May 9 for construction of lower section of Mandeville St. Wharf, piling and lumber for which will be furnished by Board; deposit \$1000; plans, specifications and proposal blanks on file in office of engineer of board. A. C. Bell, Suite 200 New Orleans Court Bldg., by whom full sets will be furnished on deposit of \$15.

Md., Port Covington (not a postoffice)—Pier.—Western Maryland Railway, H. R. Pratt, chief engineer, Baltimore, Md., will construct open pier; later may also erect additional closed pier.

Mo., Kansas City.—Wharf.—Board of Public Works awarded contract to A. M. Blodgett Construction Co. of Kansas City at \$22,760 to construct wharf along Missouri River; 566 feet long and 50 feet wide; creosoted yellow pine piles and timber with oak plank floor; work includes 10,000 yards of filling back of wharf and 2000 yards of dredging along the front; construction begun; Clark R. Mandigo, assistant engineer; plans are also being prepared for warehouse in rear of wharf. (Recently noted.)

Mo., St. Charles.—Revetment.—Government will construct standard revetment on Missouri River, about four miles from St. Charles bids received until May 22; Edward H. Schulz, Major, Engineers. (See "Machinery Wanted.")

Tex., Breckenridge—Dam.—Breckenridge Townsite Co. awarded contract to A. J. Curry to construct dam 900 feet long that will impound lake covering about 20 acres, with depth of 20 feet; contract also includes pavilion 25x50 feet.

Tex., Orange—Canal.—Orange County Commissioners and A. C. Wilkins, Jennings, La., have signed contract whereby latter will construct five-foot levee and canal through

Sabine River marsh from river to east end of Green Ave. and connecting with Transcascadia Rd.

Tex., Texas City.—Texas City Transportation Co., W. G. Brimson, president, will make various improvements to piers and warehouses; will electrify piers, erect machine shop (to be operated by electricity) for repair of equipment, etc.; another pier will probably be erected later. (See "Warehouses.")

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Printing.—Birmingham Times Printing Co. Incorporated with \$10,000 capital stock; W. F. Aldrich, president and treasurer; John Towers, secretary.

Ala., Montgomery.—Decorating.—Interior Decorating Co. Incorporated with \$2500 capital stock; William Davis, president; C. C. Boston, vice-president; Max Goodman, secretary-treasurer.

Ala., Palos—Coaling Station.—St. Louis & San Francisco Railroad, F. G. Jonah, chief engineer of construction, St. Louis, Mo., awarded contract to Roberts & Schaefer Company, engineers and contractors, Chicago, Ill., to erect frame coaling station; cost about \$10,000.

Ala., Troy—Creosoting.—Central of Georgia Railway, W. Heath, supervisor, is considering, it is reported, establishment of creosoting plant at or near Troy.

Ark., Arkadelphia—Contracting Engineers. Will F. Plumber Company of Springfield, Mo., incorporated with \$5000 capital stock; Will F. Plumber of Arkadelphia will be representative of company.

D. C., Washington—Asphalt Plant.—Commissioners District of Columbia (Cuno H. Rudolph, John A. Johnston and William V. Judson) asked Congress for authority to construct asphalt plant; total cost not to exceed \$55,000.

D. C., Washington—Laundry.—Sanitary Laundry Co. Incorporated with \$25,000 capital stock by Albert B. Willis (president Home Ice Co.), 12th and V Sts. N. W.; Edward M. Willis, Harry Lorch, Abe Cohen and Paul Steman.

Fla., Gainesville—Creosoting Plant.—Atlantic Coast Line Railroad, Wm. A. Fisher, general agent, Wilmington, N. C., awarded contract to Alfa-Chalmers Company, Milwaukee, Wis., to furnish and erect two-cylinder timber-treating plant; capacity about 1,250,000 ties annually, or fewer ties and large quantity of structural timber, piling, etc.; building of structural steel, on concrete foundations, with corrugated-iron sides and roof; machine shop; experimental cylinder included in equipment; storage tanks at plant and at export terminal docks of company at Jacksonville, Fla.; construction to begin about July. (Previously noted under "Miscellaneous Factories.")

Fla., Kissimmee—Laundry.—William Norris will establish steam laundry.

Ky., Louisville—Greenhouse.—Jefferson County Greenhouse Co. Incorporated with \$12,000 capital stock by George Kopmeyer, Charles Scholtz, Jr., and A. J. Driesbach.

Md., Baltimore—Garage.—Lambert Auto Co., Louis E. Lambert, proprietor, 6 E. Chase St., awarded contract to Gladfeiler & Chalmers, 2072 Woodberry Ave., Baltimore, at \$21,817, to erect garage and showrooms at Maryland and Mt. Royal Aves.; two stories; 50x110 feet; slab roof; steam heat; plans by Edward L. Palmer, Jr., 112 Elmhurst Rd., Roland Park. (Previously mentioned.)

Md., Baltimore—Crown Cork & Seal Co., 1501-1523 Gullford Ave., awarded contract to Monmonier & Sorrell, 1711 McCullough St., Baltimore, to erect 24 lithographing ovens at company's Highlandtown plant, Eastern Ave. and 12th St.; brick, tile and asbestos; cost \$3750.

Md., Frederick—Milk Receiving Station.—George M. Oyster, Jr., 1116 Connecticut Ave. N. W., Washington, D. C., will establish milk receiving station; purchased about two acres as site for plant.

Miss., Stafford—Mineral Water.—Coleman-Morgan Company Incorporated with \$20,000 capital stock by George L. Coleman, Charles S. Morgan and Addie L. Coleman.

Mo., Kansas City—Construction.—Plaza Construction Co. Incorporated with \$2000 capital stock by Hugh F. Tighe, James C. Griggs and John P. O'Neill.

Mo., Springfield—Stone and Fuel.—Springfield Stone & Fuel Co. Incorporated with \$16,000 capital stock by John J. Underwood, Marvin H. Southworth and Albert L. Ferrer.

Mo., St. Louis—Publishing.—Word & Works Publishing Co., Irl R. Hicks, president, has not completed plans for remodeling Trinity Church building recently reported purchased.

Mo., St. Louis—Automobile Repair.—Modern Auto Repair & Reconstruction Co. incorporated with \$10,000 capital stock by Eugene A. Freund, Alfred E. Roemmich, Charles Less, Aaron R. Solomon and William Lohse.

Mo., St. Louis—Garage.—Harry L. Jost, vice-president Trembly-Miller Realty Co., purchased site on which to erect garage; 40x80 feet.

Mo., St. Louis—Garage.—Charles Z. Trembly, president Trembly-Miller Realty Co., purchased site, 65x100 feet, on which to erect two one-story garages.

Mo., St. Louis—Automobiles and Steam Engines.—St. Louis Automobile and Engine Co. incorporated with \$50,000 capital stock by W. D. Williams, Charles F. Keene and Frank H. Braden.

N. C., Goldsboro—Hardware.—Wayne Hardware Co. incorporated with \$50,000 capital stock by R. J. Teague, W. J. Lunsford and S. W. Minor, all of Durham, N. C.

N. C., Kinston—Roofing and Plumbing.—Kinston Roofing & Plumbing Co. incorporated with \$4000 capital stock by S. H. Isler, R. E. L. Rhodes and L. E. Isler.

N. C., Waynesville—Construction and Supplies.—Waynesville Supply Co. conducts jobbing and agency in electrical, plumbing and machinery lines; also construction on same lines; J. N. Schoolbred, president; C. G. Logan, vice-president and manager; H. Rotha, secretary-treasurer. (Recently reported incorporated with \$5000 capital stock.)

Okla., Altus—Laundry.—Southwestern Steam Laundry Incorporated with \$15,000 capital stock by M. A. Snyder, E. B. Jeffrey, C. F. Morrow, E. A. Morrow and J. A. Henry.

Okla., Clinton—Hardware.—Welch Wholesale Hardware Co. incorporated with \$100,000 capital stock by B. Whittell, E. O. Humphrey, E. J. Murphy and others.

Okla., Muskogee—Decarbonizer.—Nu-Life Decarbonizer Co. incorporated with \$100,000 capital stock by E. A. Jackson, C. S. Byers and W. T. Amis.

Okla., Tulsa—Amusement Park.—Charles Page will construct amusement park, to include lake, roller coaster, shoot-the-chutes, etc.; lake will cover 42 acres land.

S. C., Georgetown—Printing.—Daily Item Co. incorporated with \$8000 capital stock by C. W. Rouse, president; Percy Deas, vice-president and treasurer.

S. C., Union Garage.—J. H. Gault will erect building to be used as garage by Edward Goodman.

Tenn., Chattanooga—Publishing.—Democrat Publishing Co. incorporated with \$25,000 capital stock by J. G. Rice, J. V. Williams, G. B. Murray, Lewis M. Coleman and George D. Lancaster.

Tenn., Montlake—Coaling Station.—Queen & Crescent Route, C. Dougherty, chief engineer, Cincinnati, O., awarded contract to Roberts & Schaefer Company, engineers and contractors, Chicago, Ill., for 500-ton reinforced concrete and steel coaling station; cost about \$18,000; now purchasing construction materials.

Tenn., Nashville—Garage.—Hager-Elliott Engineering Co. secured permit for erection of proposed automobile garage at 605-607 McGavock St.; fireproof; 70x170 feet; brick and reinforced concrete; cost \$10,000; construction work begun.

Tenn., Nashville—Dry Cleaning.—Swiss Dry Cleaning Co. incorporated with \$5000 capital stock by D. D. Canfield, O. W. Staley, J. R. Hill and others.

Tex., Galveston—Crematory.—City awarded contract to Specialty Engineering Co., Houston, Tex., to construct garbage crematory costing about \$8500; daily capacity, 40 tons; will also construct driveways, toolhouse and other accessories; V. E. Austin, City Commissioner. (Recently mentioned.)

Tex., Garrison—Mineral Water.—Weatherly Well Water Co. organized with \$25,000 capital stock.

Tex., Greenville—Dayton Construction Co. is proceeding with construction and equipment of park; cost \$20,000.

Tex., Kennedy—Garage.—J. V. Morrell awarded contract to H. H. Snowden to erect building; brick; 50x90 feet; will be used as garage.

Tex., San Antonio—Drilling.—Gulf Coast Drilling Co., recently reported incorporated with \$10,000 capital stock, has organized with I. N. Bettison, president and manager; H. G. Egli, vice-president; M. J. Bass, secretary-treasurer; will drill gas and water wells. (See "Machinery Wanted.")

Tex., Wellington—Hardware.—Pioneer Hardware Co. incorporated with \$10,000 capital stock by D. D. McDowell, F. Y. Royal and W. P. Moore.

Va., Alexandria—Electrical Supplies.—Snyder Electric Co. incorporated with \$15,000

capital stock; J. Newman Perry president; J. A. Sterrett, secretary-treasurer, both of Washington, D. C.; R. N. Snyder, Highland Park, Va.

Va., Alexandria—Photographic Supplies.—Towles-Schofield Co. incorporated with W. H. Towles president, C. O. Towles vice-president, both of Washington, D. C.; F. C. Schofield, secretary-treasurer, of Richmond, Va.; capital stock, \$60,000.

Va., Clifton Forge—Publishing.—Clifton Forge Review incorporated with \$10,000 capital stock; George O. Green, president; F. D. Brown, vice-president; M. B. Lewis, secretary-treasurer.

Va., Coeburn—Printery.—Coeburn Printing Co. incorporated with A. P. Crockett president, C. F. Kilgore vice-president, R. G. Caudle secretary; capital stock, \$10,000.

Va., Newport News—Newport News & York River Transportation Co. incorporated with \$10,000 capital stock to operate steamboat line between West Point and landing along river to Newport News; J. E. Wilkins, president; Alain D. Jones, vice-president; Ave Horwitz, treasurer; F. L. Norment, secretary.

Va., Norfolk—Electrical Supplies.—Southern Electrical Light & Power Supplying Corporation incorporated with A. D. Newcomb president, T. R. Callis vice-president, W. J. Simpson, Jr., secretary-treasurer; capital stock, \$100,000.

W. Va., Huntington—Rails.—West Virginia Rail Co. increased capital stock from \$100,000 to \$150,000; A. W. Werninger, vice-president.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Mattresses, etc.—Birmingham Bed Co. incorporated with \$25,000 capital stock; John W. S. Jones, president and treasurer; S. Belden, Jr., vice-president and secretary.

Ala., Gadsden—Coca-Cola.—Alabama Coca-Cola Co., J. H. Edmondson, manager, awarded contract to Little & Cleckler of Anniston, Ala., to erect brick building to be equipped as bottling works.

Ala., Gadsden—Chains.—Frank Krein, Sr., and Robert Krein, Wapakoneta, O., contemplate establishment of chain factory.

Ala., Mobile—Wood-pulp Paper.—Hinckley Fiber Co., George S. McKee, president, Hinckley, N. Y., is considering it is reported, establishment of wood-pulp paper manufacturing plant.

Ala., North Birmingham—Coke By-products.—F. J. Lewis Manufacturing Co., Moline, Ill. (not Chicago, as lately stated), is not prepared to state details of its plant to manufacture from coke by-product plant of Woodward Iron Co., Woodward, Ala.; recent reports stated Lewis plant to cost about \$25,000. (Mentioned lately.)

Ark., Conway—Brooms.—J. Haydon and J. S. Munns will establish broom factory with daily capacity of 40 dozen brooms; machinery ordered.

Ark., Helena—Motor Device.—Motor Device Co. organized with Jos. L. Solomon, president; J. T. Hill, vice-president; J. G. Knight, secretary-treasurer. (Recently noted incorporated with \$5000 capital stock to develop patented motor self-starter and carburetor.)

D. C., Washington—Tobacco Factory.—Henry T. Offerdingen, 504 9th St. N. W., purchased site at 508 9th St., containing about 3300 square feet of ground, and will erect five story building to be addition to present tobacco factory; estimated cost, \$30,000; size 33x91 feet; cement brick and mill construction; building proposals to be opened May 30; freight elevator; date of opening machinery bids not decided; daily capacity of plant, 50,000 to 75,000 cigars. (See "Machinery Wanted.")

Fla., Key West—Cigars.—E. H. Gato Cigar Co. will erect addition 175 feet long to cigar factory.

Fla., Tampa—Clothing.—Keller Clothing Co. incorporated with \$35,000 capital stock; I. S. Craft, president; Robert Keller, vice-president and general manager; T. C. Keller, secretary-treasurer.

Ga., Atlanta—Dental Supplies and Tools, etc.—Propylaxia Product Co. organized with C. F. Crouch, president, Dawson, Ga.; O. Lee Chesnutt, vice-president, Tifton, Ga., and C. L. Stocks, secretary, Atlanta; will establish plant for manufacturing dental supplies and tools, tooth pastes, brushes, etc.; machinery purchased; main offices in Atlanta.

Ky., Louisville—Syrup.—Cel-Tol Company incorporated with \$25,000 capital stock by Robert E. Simpson, Nora H. Wright and Eugene Wrigley.

Mo., Macon—Rail Joints.—U. R. Hatfield, recently noted with others to plan organization of \$250,000 corporation to manufacture joints for clamping steel rails, states that

J. F. Scott, secretary and treasurer, Room 910 No. 11 Broadway, New York, will give information when plans are ready; no arrangements yet made for erection of a plant.

Ky., Newport—Aeroplanes.—Dyeoplane Co. of America, 502 Monmouth St., incorporated with \$50,000 capital stock; Cleveland H. Dye, president; E. P. Tyler, vice-president; J. Frank Dye, secretary-treasurer; will open building proposals in July; mainly woodworking machinery; manufacture aeroplanes.

Ky., Nicholasville—Distillery.—Kentucky Distillers & Warehouse Co., Louisville, Ky., will erect distillery with capacity of 1000 bushels of grain per day.

La., Erath—Sugar.—Erath Sugar Co. increased capital stock from \$80,000 to \$150,000; will replace old mill with larger plant and construct about six miles of railroad into Prairie Greg; new mill to have capacity of 1000 tons daily. (Recently stated to increase capacity.)

La., Guy.—Spivey-Gay Company incorporated with \$30,000 capital stock; J. H. Spivey, president; J. Frank Dusenberry, vice-president; E. C. Gay, secretary-treasurer.

Md., Baltimore—Drugs.—W. H. Smaw & Co., 405 Hanover St., incorporated with \$50,000 capital stock by William H. Smaw, Nathan C. Muler and Charles F. Miles.

Md., Baltimore—Tire Chains.—Snap-On Tire Chain Co., Joseph Wiesenfeld, president, 14 N. Howard St., increased capital stock from \$1000 to \$50,000; has not definitely decided, but may have product manufactured by Newcastle Drop Forge Co., Newcastle, Pa.

Md., Baltimore—Screens.—Webb Fly Screen Manufacturing Co. incorporated by J. Edward Tyler, Jr., 404 Fidelity Bldg.; Albert W. Knowles and R. Prescott Webb of Arlington, Md.

Md., Baltimore—Bowling-alley Equipment Sawyer-Smith Company incorporated with \$50,000 capital stock by Edward H. Sawyer, Sr., 1415 N. Broadway; James J. Carnody, 425 Equitable Bldg., and William I. Nishwitz, 2927 Clifton Ave.

Md., Baltimore—Office and Drug Fixtures. Ruse & Thompson, 9 N. Gay St., has purchased two five-story warehouses; will remove machinery and equipment from present building and increase capacity of plant.

Md., Baltimore—Artificial Limbs.—Hopkins Artificial Limb Co. incorporated by John T. Hopkins (manager Aluminum Rawhide Artificial Limb Co.), 509 N. Eutaw St.; William P. Constable, John D. McGonigle and J. Webb Thomas.

Md., Baltimore—Fire Escapes.—Wells Champion Portable Fire Escape Co. incorporated by Mark Wells, 231 S. Broadway; John Knauss and Albert Dewall.

Miss., Belzona—Pinless Clothesline.—Mississippi-Tennessee Pinless Clothesline Co. incorporated with \$10,000 capital stock by J. S. Jackson and H. A. Sorrels of Belzona, W. T. Loggins and P. W. Parsons, Greenwood, Miss.

Miss., Jackson—Seating.—Capital Manufacturing Co. (recently reported incorporated with \$30,000 capital stock) will take over plant of Price Seating Co.; equipment mainly supplied; J. M. Hartfield, president and treasurer; A. H. Longino, vice-president; J. J. Tatom, secretary and manager. (See "Machinery Wanted.")

Mo., Fair Play—Brooms.—Cowell & Vermillion will erect broom factory.

Mo., Joplin—Cigars.—John L. Streby and Charles J. Holdeman will establish cigar factory at 522 Virginia Ave.

Mo., Kansas City—Gas Products.—Bituminous Gas Products Co. incorporated with \$50,000 capital stock by W. Clifton Hogan, L. E. Jones, W. A. Shoemaker and others.

Mo., Moberly—Gas.—Randolph County Gas & Electric Co. incorporated by Thomas F. Fulkerson and others. (See "Electric-light and Power.")

Mo., St. Louis—Cigars.—Apte Cigar Co. incorporated with \$7500 capital stock by G. S. Apte, D. J. Apte, S. W. Apte and others.

Mo., St. Louis—Brewery.—G. A. Link Supply Co. incorporated with \$50,000 capital stock by G. A. Link, John Bermel and Chas. H. Franz.

Mo., St. Louis—Medicine.—Gem Medicine Co. incorporated with \$50,000 capital stock by Wade Hollingsworth, A. M. Hollingsworth and R. L. Gurney.

Mo., St. Louis—Toilet Articles.—U-Need Sanatorium & Manufacturing Co. incorporated with \$10,000 capital stock by Ida R. Cook, James H. Campbell and John Kean.

Mo., St. Louis—Screws.—St. Louis Screw Co., Geo. Grunewald, secretary-treasurer (recently noted incorporated with \$200,000 capital stock), will continue operation of established plant; renewed charter.

Mo., St. Louis—Caps.—City Cap Co. incor-

porated with \$8000 capital stock by Jacob H. Liederman, Philip Svdvoisky and Wm. J. Baggerman.

Mo., St. Louis—Ice Cream, etc.—St. Louis Ice Cream & Soda Co. incorporated with \$15,000 capital stock by Louis Jablonaw, Nathan Pearlstein, Bertha Pearlstein and Lena Jablonaw.

Mo., St. Louis—Safety and Signal Switch.—Beck Automatic Electric Safety & Signal Switch Co. incorporated with \$50,000 capital stock by Charles Beck, Arthur Beck and Morris Tucker.

Mo., St. Louis—Hats.—Crotut & Knapp Company, South Norwalk, Conn., is considering, it is reported, establishment of hat factory.

N. C., Raleigh—Carolina Power & Light Co., Chas. E. Johnson, president, purchased Standard Gas & Electric Co.'s gas plant; plans extensive improvements, laying additional gas mains, etc.

N. C., Rosman—Tannic-acid Plant and Pulp Mill.—Gloucester Lumber Co., Jos. S. Silverstein, president, contemplates erection of tannic-acid plant and pulp mill. (See "Lumber Manufacturing.")

N. C., Statesville—Gas.—City contemplates granting franchise to Sydney Kenney, Morris Bidg, Philadelphia, Pa., to construct gas plant, lay mains, etc.

N. C., Wilmington—Gas.—Tidewater Power Co. will improve gas plant.

N. C., Winston-Salem—Motors.—Acme Motor Co. incorporated with \$125,000 capital stock by J. W. Clayton, R. Duke Hay and George W. Painter.

N. C., Wilmington—Wood Distillation.—National Wood Distilling Co. organized with H. M. Chase, president; T. W. Pritchard, vice-president, and James Kyle, secretary-treasurer.

N. C., Winston-Salem—Toilet Articles.—To-Bac-Ton Manufacturing Co. incorporated with \$100,000 capital stock; will manufacture hair tonic and toilet articles; D. C. Crutchfield, president; J. L. Wimbush, vice-president; S. A. Hutchens, secretary; W. H. Clinard, treasurer.

Okla., Muskogee—Gas.—North Muskogee Gas & Power Co. incorporated with \$25,000 capital stock by W. C. White, F. H. Grubbs, W. T. Amis, N. F. Handcock and P. B. Bostic.

Okla., Oklahoma City—Soap.—Benzene Manufacturing Co. incorporated with \$100,000 capital stock by Ralph W. Day of Oklahoma City and J. R. Thomas and S. A. Ingalsbe, Buffalo, N. Y., to succeed Benzene Soap Co.; is installing new machinery; present capacity, 1000 pounds of laundry chip and bar soap.

Okla., Oklahoma City—Medicine.—Vegatol Medicine Co. incorporated with \$20,000 capital stock by Dr. J. T. Wiggins, E. J. Deupree, J. S. Deupree, William King, Fred Kemp, T. F. Hubbell and Thos. B. Simms.

Okla., Tulsa—Glass.—Charles Page has closed contract by which Neodesha (Kans.) company will establish \$200,000 glass works.

Okla., Tulsa—Fruit Jars.—Charles Page has closed contract by which manufacturers will establish fruit-jar factory.

Okla., Tulsa—Salt.—J. S. Lawrence, representing capitalists from Oklahoma City, St. Louis and Kansas City, is considering establishment of plant for extracting table salt from salt water of oil wells.

Okla., Woodford—Asphalt.—Egyptian Asphalt Co. incorporated with \$600 capital stock by J. E. Parker of Woodford, Tom W. Neal and T. W. Doherty of Poteau, Okla.

S. C., Spartanburg—Coffee.—J. B. Crews Coffee Co. incorporated with \$7000 capital stock by John B. and E. R. Crews.

Tenn., Knoxville—Toilet Powder.—Broto Chemical Co. incorporated with \$5000 capital stock; J. C. Todd, president; H. C. Helm, general manager; established laboratory in French & Roberts Building.

Tenn., Memphis—Electric Clocks.—Thompson Electric Clock Co. incorporated with \$1000 capital stock by W. H. Thompson, William Lerner, Julius Goodman and others.

Tenn., Nashville—Gas.—Nashville Gas Co. increased capital stock by \$350,000, making capitalization \$1,500,000.

Tenn., Atlanta—Glass Bottles.—Glass bottle factory to cost \$50,000 will be established; 36-blower capacity; construction to begin May 1; information furnished by Atlanta National Bank, P. C. Willis, cashier.

Tenn., Atlanta—Window Glass.—Window glass factory to cost \$30,000 will be established; 36-blower capacity; construction will begin May 15; information furnished by Atlanta National Bank, P. C. Willis, cashier.

Tenn., Blessing—Brooms.—H. C. Tatum is considering establishment of broom factory.

Tex., Dallas—Explosives.—Will R. Allen Explosive Co. incorporated with \$5000 capital stock by Will R. Allen, R. B. Allen and C. L. Allen.

Tex., Cameron—Creamery.—Cameron Creamery incorporated with \$6000 capital stock by R. L. Tyson, Jeff T. Kemp, F. A. Marek and others.

Tex., El Paso—Cigars.—Kohlberg Cigar Co. will erect four-story cigar factory.

Tex., Fort Worth.—A Brandt Upholstering Co. incorporated with \$20,000 capital stock by A. Brandt, C. H. Knittel and J. G. Bayrehofer.

Tex., Galveston—Oil Refinery.—Magnolia Petroleum Co. organized to acquire refineries at Beaumont and Corsicana, Tex., and all properties owned and operated under firm name of John Sealy & Co.; John Sealy, president; O. C. Edwards and E. R. Brown, vice-presidents; Courtney Marshall, secretary and assistant treasurer; W. C. Proctor, treasurer and assistant secretary; main office at Galveston; branch offices at Beaumont and Corsicana.

Tex., Gainesville—Gloves.—Cherokee Glove Co., Dallas, Tex., contemplates establishing glove factory at Gainesville.

Tex., Houston—Crackers.—Loose-Wiles Cracker, Candy & Biscuit Co. of St. Louis and Kansas City, Mo., contemplates establishment of cracker factory.

Tex., Huntsville—Sugar.—Board of Prison Commissioners, J. A. Palmer, secretary, will make repairs to and install new machinery in State sugar-houses. (See "Machinery Wanted.")

Tex., San Antonio—Coffee.—Morrison Coffee Co. will be incorporated to acquire Texas Coffee Co. and build two-story plant; W. J. Morrison, president; W. F. Yarbrough, vice-president; S. F. Diggs, secretary-treasurer.

Va., Covington.—W. H. Gardner, Waynesboro, Va., is considering establishment of extract plant; product for tanning and dyeing.

Va., Fredericksburg—Trousers.—Washington Woolen Mills Co. increased preferred stock from \$10,000 to \$20,000.

Va., Graham—Gas.—J. Elliott Hall, Box 205, Bluefield, W. Va. (recently noted to receive franchise), will establish separate company for Graham to own distributing system, mains, laterals, etc.; plans not completed; will purchase gas from Bluefield (W. Va.) Gas & Power Co., with which Mr. Hall is financially connected; distance from Bluefield to Graham one mile. (See "W. Va., Bluefield.")

Va., Petersburg—Paint.—Virginia Paint Manufacturing Co. incorporated with R. B. Davis, Jr., president; R. T. Wilson, vice-president; W. L. Young, secretary and treasurer; capital stock \$10,000.

Va., Richmond—Bakery.—Romm & Graeck incorporated with \$15,000 capital stock; Dora Romm, president; Pincus Graeck, vice-president; Max Friedman, secretary-treasurer.

Va., Richmond—Chewing-gum.—Franklin Manufacturing Co. changed name to Franklin-Caro Company and increased capital stock from \$50,000 to \$100,000; address, 2405 E. Franklin St.; daily capacity, about 2000 boxes chewing-gum. (See "Machinery Wanted.")

Va., Roanoke—Glass.—Piedmont Glass Co. incorporated with \$100,000 capital stock; A. W. Conway, president; Henry Scholz, vice-president; A. B. Hunt, secretary and treasurer.

Va., Rosslyn—Gas.—Rosslyn Gas Co. incorporated with \$100,000 capital stock; D. S. Macall, president, Langley, Va.; H. W. Finney, vice-president, Rosslyn; W. T. Wenner, treasurer, Washington, D. C.

W. Va., Parkersburg—Progress Baking & Provision Co. incorporated with \$25,000 capital stock by John Morris, Charles H. Baderon, Patrick King, George H. Duher and Harry Abramson, all of Pittsburgh, Pa.

W. Va., Bluefield—Gas.—Bluefield Gas & Power Co. organized with L. I. Pollitt, president, 213 Courtland St., Baltimore, Md.; W. J. Jenks, vice-president; E. T. Tyree, treasurer; W. E. Ross, secretary, 32 Higginbotham St.; general manager to be elected later; will build coal-gas plant to cost about \$140,000; plans and specifications completed; contracts for erection of plant and laying of gas mains to be let within few days; operation contemplated for September; further particulars concerning contracts and supplies obtainable from L. Irving Pollitt, 1715 Park Ave., Baltimore, president of company and manager of Baltimore Utilities Co., Baltimore, Md., which latter company will direct construction and operation of Bluefield Gas & Power Co.'s plant. (Lately reported incorporated with \$350,000 capital stock.)

W. Va., Parkersburg—Bakery.—L. E. Robison will erect bakery; two stories; concrete block; oven; second story for resi-

dence; size of building 25x52 feet; cost \$3000; contract awarded to S. F. Ross of Parkersburg.

W. Va., Wheeling—Medicines.—Neuralgyline Company increased capital stock to \$2,500,000.

W. Va., Wheeling—Chewing-gum.—Wheeling Gum Co. incorporated with \$250,000 capital stock by John H. Rennard, A. G. Hubbard, H. Lee Daily, J. E. Wright and others.

W. Va., Wheeling—Gas.—Board of Control, City Bldg., Wheeling, W. Va., will receive bids until 10 A. M. May 8 for wrecking of easterly retort-house and erecting new retort-house and laying of pipe in connection; plans and specifications on file in office of City Engineer, City Bldg.; certified check, \$500; entire water-gas system proposed will cost about \$104,000; building will be brick; 44x86 feet; fireproof construction; plans by William A. Baehr, Chicago, Ill.; bids for machinery will also be received May 8. (See "Machinery Wanted.")

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ga., Ashburn.—Gulf Line Railway, W. T. Hargrett, general superintendent, Sylvester, Ga., will erect shops; main shop 40x100 feet; car shop 30x50 feet; office and storeroom 10x32 feet; oil house 10x15 feet; contract for construction awarded.

Ky., Frankfort.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., contemplates construction of car shops.

W. Va., Clarksburg.—Fairmont & Clarksburg Traction Co., James O. Watson, general manager, Fairmont, W. Va., is preparing plans for carhouse and repair shop; car house, 65x200 feet, and accommodate 30 cars on five tracks; repair shop, 20x80 feet; brick and steel construction.

W. Va., Wheeling.—Wheeling Traction Co. will erect addition to Island car barns for machine shop; two-story brick building.

ROAD AND STREET WORK

Ala., Tuscaloosa.—City will receive bids May 4 on 4155 yards sidewalk, 13,000 feet curb and 4465 feet combined curb and gutter; W. H. Nicol, City Engineer. (See "Machinery Wanted.")

Ala., Selma.—City has issued bonds for paving Broad St. from Dallas St. to Union Station; work to begin within 60 or 90 days; material will be asphalt, hessian or bitulite; Julian Smith, City Engineer, will prepare plans and specifications and supervise construction; has also passed ordinance for paving three blocks in business section, Franklin, Green and Sylvan Sts., with brick; bids will be advertised. (Recently noted.)

Ark., Fort Smith.—City will repave Garrison Ave. Address Mayor Boulard.

Ark., Helena.—City Council authorized formation of improvement district for paving all streets. Address Hugh Martin, Mayor.

D. C., Washington.—District Commissioners awarded contract to Cranford Paving Co., 2620 E St. N. W., Washington, for asphalt resurfacing and repairing.

D. C., Washington.—William A. Jones of Warsaw, Va., introduced bill in House of Representatives appropriating \$100,000 for construction of national highway from Washington to Fredericksburg, Va., by way of Mt. Vernon.

Fla., Bradenton.—Manatee County Commissioners awarded contract to Hackney & Co. to construct road from Bradenton to Sarasota.

Fla., Brooksville.—Town voted \$18,000 bond issue for street improvements; about \$16,000 is to be expended in paving roadways with vitrified brick and remaining \$2000 to construct sidewalks; W. A. Thaxton, Town Clerk.

Fla., Fort Lauderdale.—Chambers Land Co. will construct rock road from Deerfield into the Glades, 15 miles; then south through the Glades, opposite Fort Lauderdale, to Fort Lauderdale; another road from Davy Ditch, 3 miles, into the Glades; then south to canal leading to Miami; total of about 40 to 50 miles of road.

Fla., Tampa.—City will construct 450 linear feet driveways in Woodhawn Cemetery, 15 feet wide, making 750 square yards; also 400 linear feet driveways, 11 feet wide, making 490 square yards; paving to be of shell, six inches deep in center and four inches deep on side; bids received until May 5; O. Falk, chairman cemetery committee. (See "Machinery Wanted.")

Ga., Dublin.—Laurens county contemplates road improvements; will probably issue bonds. Address County Commissioners.

Ga., Jesup.—Wayne county will vote on is

suing \$100,000 of bonds for road construction and bridging Altamaha River. Address County Commissioners.

Ga., Nashville.—Berrien county awarded contract to J. E. Newberry to construct 10.7 miles of road; drains are to be bridged; right of way to be 30 feet wide. (Recently mentioned.)

Ky., Maysville.—City awarded contract to Reed & Dawson to pave sidewalks in Forest and Houston Aves. and Williams St., about 15,000 feet, and to Hord, Pollitt & Farow about 14,000 feet; City Council will readvertise for bids for proposed construction of brick streets in West and East 2d St.

Ky., Mt. Olivet.—Robinson County Fiscal Court voted \$2500 to aid in constructing turnpike from Sardis Pike to Johnson's bridge, about four miles; \$3000 additional secured by subscription.

La., Grant Parish.—State Board of Engineers and Gervais Lombard, State Highway Engineer, New Orleans, La., rejected bids for construction of highway in Grant parish from Colfax to Rochelle, 22 miles; new bids are invited until May 15. (Recently mentioned under New Orleans, La. See "Machinery Wanted.")

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$135 for paving Diana St. from Brooklyn Ave. to Teche St. with bitulithic; Barber Asphalt Paving Co., Philadelphia, Pa., is lowest bidder at \$148.80 for subsurface work; W. J. Hardee, City Engineer.

La., New Orleans.—Southern Bitulithic Co

and South Wesley, Oneal, Pickett, W. Washington, St. John and North and South Stonewall St.; will readvertise for bids on paving Park, S. Johnson and E. Lee Sts.; W. A. Fraser, City Clerk; E. L. Dalton, consulting engineer, Dallas, Tex. (Call for bids recently noted.)

Tex., Goldwater.—Mills county defeated \$50,000 bond issue for road construction. Address County Commissioners. (Recently mentioned.)

Tex., Houston.—Houston Harbor Co. awarded contract through Tolman Engineering Co. for grading of Houston Harbor St., in Houston Harbor Addition; street will be 14,000 feet long and 60 feet wide. (Lately mentioned.)

Tex., Houston.—Harris county will pave Washington county road from city's limits of Houston to Houston Heights Blvd.; bids received until May 10; Howe & Wise, County Engineers, First National Bank Bldg., Houston. (See "Machinery Wanted.")

Tex., Lockhart.—City will construct cement sidewalks in residence section. Address The Mayor.

Tex., Longview.—Gregg county contemplates voting on \$200,000 bond issue for grading and macadamizing roads. Address County Commissioners.

Tex., Taylor.—E. R. Overstreet has completed survey of proposed nine-mile roadway to be macadamized from Taylor to point two miles from Thrall; J. W. Green, subcontractor, will macadamize four miles, and balance will be macadamized by Texas Building Co. of Fort Worth, Tex.

Tex., Tyler.—Smith county will vote, it is reported, on \$10,000 road-improvement bond issue. Address County Commissioners.

Tex., Waxahachie.—Ellis County Commissioners contemplate beginning construction of proposed 200 miles of roads in June; use local cement gravel; commissioners to act as road supervisors and employ local labor; engineering work by county surveyor; amount \$555,000; J. C. Lumpkins, County Judge.

Va., Alexandria.—City contemplates improving streets; cost may aggregate \$75,000. Address The Mayor.

Va., Boydton.—Mecklenburg county will vote June 17 on issuance of \$50,000 of bonds for road improvements in Lacorosse magisterial district and \$50,000 for road improvements in South Hill district. Address County Commissioners.

Va., Norfolk.—City awarded contract to Perry W. Ruth & Co. at 14½ cents per linear foot to place 2800 feet curbing on Bank St. from Freemason to Queen St., and to Foster & McReynolds at 89 cents per square yard to construct granolithic walkways in rear of courthouse.

Va., Petersburg.—City will construct 2000 yards granite block pavement on West Tabb St. from Market to Union St.; bids opened April 27; R. D. Budd, City Engineer.

Va., Richmond.—City will grade hillside in Taylor and Chimborazo parks, and erect bandstand in certain parks; bids opened May 4; Charles E. Bolling, City Engineer.

W. Va., Bluefield.—City will grade and macadamize Princeton Ave. East from east end of overhead bridge to corporate limits of city; bids received until May 12; S. Frazier Stowers, Mayor. (See "Machinery Wanted.")

W. Va., Clarksburg.—West Milford Pike Rd. (contract recently noted awarded by Harrison County Commissioners at \$820 to W. T. Gates & Co., Flemington, W. Va.) will be graded and rolled, then constructed of vitrified paving blocks on base of broken stone, cinder and sand; test road; if satisfactory, county may construct many miles of similar road; C. C. Fettro, County Road Engineer.

W. Va., Lumberport.—Town is considering, it is reported, issuance of \$10,000 of bonds for street improvements. Address Town Clerk.

SEWER CONSTRUCTION

Ala., Decatur.—W. M. Leftwich Company, Nashville, Tenn., advises Manufacturers Record that contracts for storm and lateral sewers have not been let pending sale of bonds. (Recently noted awarded contract to this company.)

Fort Valley.—City voted \$40,000 bond issue for sewer system, water-works and school building. Address The Mayor.

Ga., Blakely.—City voted issuance of \$60,000 of bonds for improvement of sewer system and erection of school building. Address The Mayor. (Recently mentioned.)

Ky., Lexington.—Extension to southern main sewer (bids recently noted opened April 24) will cost within \$3000. John Skaln, Mayor, advises Manufacturers Record that

city has adopted plans providing for large sewage-disposal plant, but that no steps will be taken for construction during this year.

Md., Baltimore.—City voted \$30,000,000 of bonds to continue construction of general sewerage system; construction in charge of Sewerage Commission, Calvin W. Hendrick, chief engineer; offices in American Bldg. (Previously mentioned.)

Md., Baltimore.—Messerschmidt & Kohlstrand, 622 Law Bldg., will construct sewer system. (See "Land Developments.")

Md., Princess Anne.—Town will construct sewer system; bids invited. Address President or Commissioners of Princess Anne. (See "Machinery Wanted.")

Md., Ridgely.—Town Commissioners (L. T. Saulsbury, J. M. Suing and others) will consider construction of sewer system.

Mo., Kansas City.—Kaw Valley Drainage Board awarded contract for construction of sewer protected by floodgates; cost \$11,000.

Mo., St. Joseph.—Board of Public Works, J. P. Srite, clerk, awarded contract to Skilled Construction Co. at \$224,15 for construction of 15th street extension of Upper Whitehead main sewer; plain concrete. (Recently noted.)

N. C., Gastonia.—City will expend \$15,000

to extend sewer line; H. Rutter, engineer in charge of plans and construction. (Recently noted to award contract for sewer construction in West Gastonia to amount of \$4090.)

N. C., Clayton.—City is having plans prepared by Gilbert C. White, Durham, N. C., for sewerage and water-works.

Okl., Muskogee.—City Council will receive bids May 23 for construction of portion of Cooey Creek sanitary outfall sewer; sections 1 to 6, inclusive; plans and specifications at offices of T. P. Clonts, City Engineer, and of consulting engineer, Alexander Potter, 114 Liberty St., New York, on or after May 10; Chas. Wheeler, Jr., City Clerk; bond issue, etc., previously noted. (See "Machinery Wanted.")

Okl., Muskogee.—City will construct sanitary sewers in Sanitary Sewer Districts Nos. 44, 52, 53, 55, 56 and 58; bids received until May 8; Charles Wheeler, Jr., City Clerk. (See "Machinery Wanted.")

Okl., Oklahoma City.—City will construct North Side sanitary main sewer system and stockyards sanitary main sewer system; bids received until May 8; Bob Parman, City Clerk. (See "Machinery Wanted.")

Okl., Oklahoma City.—Sewer Committee recommended award of contract to Bennett & West at \$425,30 for constructing main storm sewer in Waller Ave. between Ave. A and Ave. E, and at \$143,45 for constructing sewer on Ave. E from Robinson Ave. to Lightning Creek; W. C. Burke, City Engineer.

S. C., Dillon.—City will vote on \$80,000 bond issue for sewer system and water-works. Address The Mayor.

Tex., Fort Worth.—City's sewer construction in Highland Park and Southland Additions (recently noted) will include about 6500 feet of 8-inch mains emptying into city sewers; 6-inch laterals; 3 to 6-foot trenches; cost \$16,000; C. B. Collard, engineer in charge; address, office of City Engineer.

Tex., Honey Grove.—Honey Grove Sewer Co. will expend about \$15,000 on recently noted sewer system; construction by J. W. Whatley; W. O. Clark, engineer.

Tex., Kerrville.—City contemplates construction of sewer system; is consulting with South Texas Engineering & Construction Co.

Tex., Waco.—City is considering extension of storm and sanitary sewer system; P. A. Gorman, Street Commissioner.

TELEPHONE SYSTEMS

Ky., Brown's Grove.—Mayflower Telephone Co., Robt. E. Mangrum, president, R. 1, Farmington, Ky., is extending rural telephone lines.

N. C., Townsville.—Northwestern Telephone & Telegraph Co. incorporated with \$10,000 capital stock by G. W. Morrow, J. J. White and W. B. Chapin.

Tex., Temple.—Southwestern Telephone & Telegraph Co. (main office, Dallas, Tex.) will place telephone wires underground in Adams Ave., between 1st and 2d Sts.

Tex., Tyler.—Gulf States Telephone Co. organized with \$25,000 capital stock; purchased property of Southern Telephone & Telegraph Co., including 30 exchanges in Kaufman, Smith, Upshur and other counties; S. A. Lindley is president; H. B. Marsh, vice-president; F. H. Merrell, secretary; A. L. McMurray, treasurer. (Gulf States Telephone Co. of Dover, Del., recently stated as

proposing construction of telephone system through East Texas.)

TEXTILE MILLS

La., New Orleans.—Cotton Goods.—Lane Mills will build brick addition costing \$4200.

N. C., Franklinville.—Cotton Cloth.—Randolph Manufacturing Co. will install 100 looms and finishing machinery; has placed contracts.

N. C., Rockingham.—Plaids, etc.—Roberdeau Manufacturing Co. will erect one-story 62x114-foot addition; on completion will equip with machinery of present beaming and slashing room; latter will then be equipped with 96 looms; has purchased these looms and carding and spinning machinery.

N. C., Winston-Salem.—Underwear.—Malline Mills will install additional equipment, including 5 knitting machines, 12 sewing machines, 1 napper, etc.; has placed contracts.

S. C., Greenville.—Cotton Goods.—Woodside Cotton Mills Co. is organizing with \$3,000,000 capital stock to consolidate Woodside Cotton Mills of Greenville, Fountain Inn Manufacturing Co. of Fountain Inn and Simpsonville Cotton Mills of Simpsonville; officers will be: President, John S. Woodside; vice-presidents, J. David Woodside and E. F. Woodside; mills have 137,000 spindles and accompanying looms.

S. C., Jefferson.—Knit Goods.—J. C. Miller is interested in plans to establish knitting mill. (See "Machinery Wanted.")

S. C., Lexington.—Cotton Goods.—Middlebury Mills will increase capital stock from \$100,000 to \$300,000.

Tenn., Cleveland.—Cassimeres.—Cleveland Woolen Mills will add four sets cards, 10 looms, two fulling mills, cloth washer, etc.; all purchased.

Tex., Waco.—Cotton Goods.—Waco Business Men's Club, G. K. Hardwick, assistant secretary, is interested in plan to build 5000-spindle cotton mill; no details determined. (See "Machinery Wanted.")

WATER-WORKS

Ala., Gadsden.—City voted issuance of \$50,000 of bonds for completion of water-works and extension of mains; contract for construction work awarded; Hazlehurst & Anderson, Atlanta, Ga., engineers in charge of work now being constructed; contract for laying of mains not let; machinery mainly purchased; W. G. Bellinger, Mayor. (Recently mentioned.)

Ala., Columbiana.—City will vote May 15 on \$7000 bond issue for construction of water-works. Address The Mayor.

Ark., Imboden.—George Dutton purchased from People's Bank water-works and electric-light systems; contemplates extension and improvement.

Ga., Fort Valley.—City voted \$40,000 bond issue for water-works, etc. Address The Mayor. (See "Sewer Construction.")

Ga., Oglethorpe.—City voted \$18,000 of bonds to construct water-works and electric-light plant; bids opened about July 1; J. P. Nelson, Mayor. (Recently mentioned.)

Ky., Madisonville.—City will vote on issuing \$85,000 of bonds to construct water-works. Address The Mayor.

Ky., Somerset.—United Water, Light & Traction Co., recently reported incorporated with \$100,000 capital stock by William Wadde, Louisville, Ky., and others, will construct dam with capacity of 12,000,000 gallons of water.

La., Ruston.—City Water and Light Plant awarded contract to Clifford Well Co., Texarkana, Ark., to drill 12-10 artesian well. (See "Machinery Wanted.")

Md., La Plata.—Town voted \$15,000 bond issue for water-works. Address Town Commissioners.

Mo., Cole Camp.—City voted \$10,000 of bonds to construct water-works. Address The Mayor. (Previously mentioned.)

Mo., Pleasant Hill.—C. W. Dohlbins, Pleasant Hill (recently noted to receive water-works franchise) states he will consider bids on complete plant or on parts; 100-acre reservoir; 50-gallon tank on 50-foot tower; two 200-gallon-per-minute motor-driven pumps; plant to be in operation by November 1. (See "Machinery Wanted.")

N. C., Clayton.—City is having plans prepared by Gilbert C. White, Durham, N. C., for water-works and sewerage.

N. C., Morehead City.—City awarded contract to Harris Hardware Co., Washington, N. C., to construct water-works; standpipe to be 120 feet high, with capacity of 12,000 gallons; cost about \$20,000; G. D. Canfield, chairman Water-Works Commission. (Call for bids recently noted.)

Okl., Kingfisher.—City will construct water-works; 200,000 gallons capacity; install filtration plant, 250-gallon centrifugal pump, etc.; cost \$12,000; date of opening bids not set; V. H. Francis, superintendent of water and light plant. (Bond issue of \$28,000 recently noted voted for water-works and enlargement of electric-light plant.)

Okl., Ada.—City awarded contract for material and labor for construction of Byrds Mill water-works, estimated to cost \$150,000; water to be piped 18 miles; require 66,000 linear feet pipe; Goodwin & Harper, consulting engineers, 929 Scarritt Bldg., Kansas City, Mo. (Recently mentioned.)

Okl., Bartlesville.—Bartlesville Light & Water Co., E. L. Orr, receiver, will expend \$106,000 for improvements to water plant.

Okl., McAlester.—City voted issuance of \$80,000 additional bonds for water-works improvements; will extend system to Gaines Creek, distance of 10 miles, using six-inch pipe; W. P. Halliday, City Engineer. (Recently mentioned.)

Okl., Skiatook.—City voted bond issue for water-works. Address The Mayor.

Okl., Tulsa.—City's water-works improvements will cost \$100,000; include new boiler-house and settling basin; concrete and brick construction; reservoir capacity 5,000,000 gallons; L. J. Martin, Mayor, states that boilers and about 900 tons pipe have been purchased, and bids received for pump. (Recently noted to improve water-works.)

Okl., Vian.—City voted issuance of \$20,000 water-works bonds. Address The Mayor. (Recently mentioned.)

Okl., Weleetka.—City voted \$45,000 bond issue for water-works and electric-light plant. Address The Mayor.

S. C., Dillon.—City will vote on \$80,000 bond issue for water-works and sewer system. Address The Mayor.

Tenn., Bristol.—City has applied to Legislature for permission to issue \$40,000 water-works bonds. Address The Mayor.

Tenn., Dyersburg.—City voted \$25,000 bond issue for water-works; 40,000 gallons capacity; R. C. Houston, 1219 Central Bank Bldg., Memphis, Tenn., prepared plans; R. B. McDaniel, Mayor. (Mentioned in March.)

Tenn., Lexington.—City contemplates construction of water-works and electric-light plant; has authority of Legislature to issue \$50,000 of bonds. C. G. Gathings, Mayor.

Tenn., Newport.—City voted \$50,000 bond issue for construction of water-works; gravity system. Address The Mayor. (Recently mentioned.)

Tex., Bonham.—City will vote May 15 on \$30,000 bond issue for water-works. Address The Mayor.

Tex., Clarksville.—City voted bond issue for repairs at water-works pumping station and extension of water mains. Address The Mayor.

Tex., Commerce.—City voted \$5000 of water-works bonds. Address The Mayor.

Tex., Santa Anna.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, Galveston, Tex., will construct reservoir; site to comprise 300 to 400 acres; dam to be of concrete, 1000 yards long and 50 feet high; cost about \$50,000.

Tex., Killeen.—Atchison, Topeka & Santa Fe Railway will, it is reported, construct reservoir to cover 75 acres; John Roach, division engineer, Amarillo, Tex.

Tex., Pecos.—Thomas L. Fountain of Fountain-Shaw Engineering Co., Dallas, Tex., will confer with city relative to construction of soft-water system for commercial purposes; proposed to pipe water to city from distance of 10 to 14 miles.

Va., Christiansburg.—City voted issuance of \$40,000 of bonds for construction of water-works; plans not made; E. S. Hagan, Mayor. (Recently mentioned.)

Va., Richmond.—City will expend about \$75,000 for water system in Washington Ward; Charles E. Bolling, City Engineer.

Va., Fort Myer.—Capt. Warren W. White, side, Constructing Quartermaster, will receive bids until May 25 to construct 10-inch water main from Rosslyn to Fort Myer, Va., distance of two miles, and remodel pump-house. (See "Machinery Wanted.")

WOODWORKING PLANTS

Ala., Attalla.—Sash, Doors and Blinds.—Attala Lumber Co. increased capital stock from \$10,000 to \$25,000.

Ga., Rome.—Furniture.—J. M. McD. Veal and J. N. Mays organized Cherokee Furniture Co. with \$15,000 capital stock to manufacture mission furniture.

Ky., Eddyville.—Cooperage Stock, etc.—N.

L. Chrisman, Louisville, Ky., purchased 400

acres of timber land from Harmon Land & Iron Co. for \$8500; will manufacture timber into cooperage stock and crossties.

Ky., Louisville.—Furniture.—Inman Furniture Co. incorporated with \$150,000 capital stock by Hesse Runyan, J. P. Runyan, H. E. Bills, Theodore Kemnitz, Frank A. Collier and others.

Miss., Floweree—Staves.—Floweree Stave Co. incorporated with \$10,000 capital stock by J. T. Carson, W. H. Joralemon, W. H. Miller and others.

Miss., Jackson—Sash, Doors and Store Fixtures.—Westbrooks Manufacturing Co. will rebuild plant recently reported burned; will construct buildings: 90x170 and 30x60 feet; cost about \$5000; machinery mainly supplied. (See "Machinery Wanted.")

N. C., Wilmington—Handles.—Wilmington Handle Co. incorporated with \$125,000 capital stock by Angus McNeill of Wilmington; John N. Hopkins, Waycross, Ga.; Octavius Hopkins and Octavius Hopkins, Jr., Darien, Ga., and others.

Tex., Houston—Handles.—Texas Handle Co. incorporated with \$25,000 capital stock by C. McClamroch, E. J. Coar and Dr. E. L. Coar.

Va., Emporia—Building Materials.—Emporia Sash & Door Co. incorporated with \$25,000 capital stock; N. W. Robinson, president; J. W. Watkins, vice-president; R. W. Jordan, secretary-treasurer.

BURNED

Ala., Orrville.—Hotel Orr: loss \$8000.

Ala., Montgomery.—Busy Bee Cafeteria; Hirsch Bros.' store; loss \$50,000.

Ala., Talladega.—Mrs. Harold Stockdale's residence; William Hancock's residence.

Ark., Tuckerman.—W. C. Hubbard's residence; Dr. D. C. Dowell's residence.

D. C., Takoma Park.—Review & Herald Publishing Co. building of Seventh Day Adventists; estimated loss \$12,000.

Fla., Live Oak.—S. N. Conner's residence; loss \$2000.

Fla., Martel.—Depot of Atlantic Coast Line Railway, E. B. Pleasants, chief engineer, Washington, N. C.

Fla., Taylorville.—Edge-Dowling Lumber Co.'s sawmill, planing mill and drykilns; loss \$100,000.

Fla., Tampa.—W. H. C. Carruthers' commission-house.

Ga., Chelsea.—Leslie & Gracer's store.

Ga., Norwood.—Public school building. Address The Mayor.

Ga., Griffin.—G. W. Goldstein's store (recently reported burned) was but slightly damaged; no repairs to be made.

Ky., Brandenburg.—George Meader's tobacco bar: loss \$25,000.

Ky., Burkesville.—Burkesville Hotel; loss \$5000.

Ky., Catlettsburg.—City building adjoining jail and fire station; loss \$6000. Address The Mayor.

Ky., Richmond.—Major Well's residence; loss \$3000.

Ky., Woodlake.—James Hughes' residence near Woodlake; loss about \$3000.

La., New Orleans.—Building owned by estate of Wm. Bartel at 227-231 Chartres St.; loss \$4000.

Miss., Oxford.—University Training School, owned by Wyatt & Hurst; loss \$25,000.

Miss., Vicksburg.—Feld Bros.' warehouses.

Mo., Chillicothe.—Chillicothe Foundry & Machine Co.'s plant; estimated loss, \$25,000.

Mo., Kansas City.—Webb-Freyschlag Mercantile Co.'s building; loss \$4500.

N. C., Duke.—H. V. Moulton's sawmill; loss \$1500 to \$2000.

N. C., Burlington.—Walter Moser's residence.

N. C., Louisburg.—Louisburg Cotton Oil Mill damaged; loss \$5000.

Okla., Anadarko.—Riverside Government Indian School's dormitory; loss about \$16,000. Address The Superintendent of River-side Indian School.

Okla., Cement.—Acme Portland Cement Co.'s plant; estimated loss \$100,000.

S. C., Lugoff.—Catawba Lumber Co.'s plant; main offices in Rock Hill, S. C., with U. M. Pursey as manager.

S. C., Rowesville.—Rowesville Cotton Oil Co.'s plant damaged, loss \$4000; J. H. Blake Lumber Co.'s commissary and office building, loss \$3000.

Tenn., Chattanooga.—City warehouse; loss about \$5000.

Tenn., Dayton.—Gilbert House, owned by R. L. Williams.

Tenn., Humboldt.—J. E. Campbell's residence.

Tenn., Knoxville.—W. M. Goodman's residence; loss \$5000.

Tenn., Kingsport.—Dave Sevier's barn; loss \$4000.

Tenn., Memphis.—Waldron Block, owned by John Gaston and Mrs. L. W. Hopkins; loss about \$18,000.

Tenn., Memphis.—Palmer House; loss \$50,000.

Tenn., Morristown.—Guy Daniels' planing mill; building owned by M. A. Goodson; machinery owned by J. C. Acuff; estimated loss, \$1500.

Tenn., Prospect.—Walter Whitfield's residence; loss \$4500.

Tenn., Yuma.—W. A. Pinkley's store; W. G. Rainey's store; R. L. Walker's store; J. H. Holmes' store; loss about \$10,000.

Tex., Bremond.—F. Donnelly's building; loss \$4500.

Tex., Clairemont.—W. B. Rodgers' residence; loss \$6000 to \$8000.

Tex., Llano.—Alpha Sanitarium, owned by Dr. J. T. Bernard.

Tex., Tenaha.—Wall office building, loss \$52,000; McFarland Bros. & Hill's store, loss \$15,000; W. F. Walker & Son's building, loss \$35,000.

Va., Clarkburg.—Clarkburg Lumber & Planing Co.'s plant; loss about \$65,000.

Va., Leesburg.—F. D. Paul's barn; loss \$5000.

Va., Suffolk.—E. E. Holland's residence, near Killly Station.

W. Va., Charleston.—Roane St. M. E. Church and parsonage; loss about \$3000; Rev. Robert Yoke, pastor.

W. Va., Grafton.—Billibain Coal Co.'s power plant; loss \$15,000.

W. Va., Pineville.—R. A. Keller's residence; Bob Beavers' residence; Lusk Hotel and other buildings; total loss about \$25,000.

La., Bogalusa.—Commercial Bank, organized by H. D. Blackham of Hackley, La., and others, purchased building and will remodel for bank building.

Md., Baltimore.—Charles T. Le Viness, 8-10 South St., contemplates erection of office building on South St. opposite German St.; cost about \$250,000.

Miss., Seminary.—Richard T. Taylor will erect store and office building. (See "Stores.")

Mo., St. Louis.—Laclede Gaslight Co. will erect office building; steel or concrete; heavy foundation, capable of supporting additional stories later; cost \$250,000; site 38x107 feet.

Mo., St. Louis.—May Department Stores Co. is reported as having plans prepared by Mauran & Russell, St. Louis, for store and office building. (See "Stores.")

N. C., Durham.—Dr. C. W. Banner is having plans prepared by F. A. Weston, Durham, for three-story office building; pressed brick and plate-glass front.

N. C., Judson.—Whiting Manufacturing Co., Asheville, N. C., is having plans prepared by Smith & Carrier of Asheville for office building.

Okla., Muskogee.—Commercial Club and city are reported to erect office building; 10 stories; reinforced concrete construction; cost \$400,000; building will be 110 feet square; architect not selected; election for bond issue of \$500,000 to be called soon.

S. C., Greenville.—A. W. Stewart Engineers Co., architects, Masonic Temple, Greenville, will receive bids until May 19 to remodel Palmetto Bldg., on S. Main St.; 50x100 feet; two stories will be added, making building five stories high; fireproof construction; reinforced concrete or steel frame; composition roof; metal cornice; brick walls; passenger elevator.

Tenn., Jackson.—Central Lumber Co., J. N. Pitts, manager, will erect two-story brick office and warehouse building; 40x80 feet.

Tenn., Knoxville.—H. A. Depue and Charlton Karnes will erect store and office building. (See "Stores.")

Tenn., Moscow.—O. H. Cribbins will erect store and office building.

Tex., Abilene.—First State Bank & Trust Co. will remodel building at Pine and N. Second Sts.; install vault, etc.

Tex., Dallas.—Gross R. Scruggs & Co. are having plans prepared by Lang & Witchell, Dallas, for four-story addition to building at Ray and Jackson Sts.; reinforced concrete; cost \$75,000.

Tex., Lubbock.—First National Bank will erect two-story brick building.

Tex., Lubbock.—Citizens' National Bank will erect building; three stories; fireproof; brick.

Tex., Pandora.—State Bank organized by J. H. Blake, Jr., and others to erect bank building.

Tex., Waco.—C. L. Johnson of C. L. Johnson & Son will erect concrete office building; 80x350 feet.

Tex., Weimar.—T. A. Hill will erect brick bank building.

Tex., El Paso.—City National Bank of El Paso will repair bank building recently reported damaged; no contracts.

Tex., Jefferson.—Hussey & Wheelan will erect 75x100-foot bank and store building; brick; cement floor; bank will be occupied by Guaranty State Bank of Jefferson. (See "Machinery Wanted.")

Va., Richmond.—Life Insurance Co. of Virginia is having detailed drawings prepared by Clinton & Russell, 32 Nassau St., New York, for office building; fireproof; steel and concrete construction; present structure to be five stories; will probably erect 10 additional stories later; frontage 140 feet. (Recently noted.)

Va., Stuart.—Patrick County Bank will receive bids until noon May 20 to erect bank building; 24x40 feet; two stories; brick; plans by Pettit & Cave, Danville, Va.; plans and specifications at office of The Sentinel and at bank.

Va., Vines.—First National Bank, O. P. Vines, cashier, will receive bids to erect two-story brick bank building according to plans by A. F. Wysong, Princeton, W. Va.; structure will be 28x48 feet; two stories; ordinary construction; cost \$5000.

CHURCHES

Ala., Birmingham.—Congregation of Temple Emanuel is having plans prepared by C. W. Weston, Brown-Marx Bldg., Birmingham, for temple; cost \$70,000; for further information address Samuel Adler, fourth floor Brown-Marx Bldg., chairman building committee. (Recently noted.)

Ga., Atlanta.—Trinity Methodist Episcopal

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ala., Birmingham.—Robert Stevens will erect apartment-house; two stories; brick; cost \$5000.

Ala., Birmingham.—Thornton & Anderson will expend \$50,000 to erect apartment-house; 100x100 feet; fireproof reinforced concrete construction; Maltese Cross shape; direct steam heat; conduit system of electric lighting; elevator; plans recently noted as being prepared by William Leslie Welton, 129 Empress Bldg., Birmingham.

D. C., Washington.—Miss Zada T. Kemp has plans by Arthur W. Hall, Evans Bldg., Washington, for apartment-house on Columbia Rd. near 15th St. N. W.; 16 four and five-room apartments; white marble to second story; red rough brick with white stone trimmings above; 50x135 feet; cost \$50,000.

D. C., Washington.—Samuel W. Woodward of Woodward & Lothrop, 10th, 11th, F and G Sts. N. W., has plans by and awarded contract to S. H. Edmondston, 611 G St. N. W., Washington, to erect apartment-house at 1830 14th St. N. W.; three stories; cost \$60,000.

Ga., Atlanta.—Summers & Rosenthal will erect apartment-house; cost \$16,000.

Ga., Atlanta.—Byron Souders is having plans prepared by J. R. MacEachron, 932 Candler Bldg., Atlanta, for apartment hotel; 357 rooms; "H" shape; eight stories; fire proof; reinforced concrete; 75x135 feet; Gothic style; gray terra-cotta facings; sub-basement to contain heating and ventilating appliances; glass-covered veranda entire length of front; two elevators; cost about \$150,000.

Ga., Atlanta.—T. C. Green and R. C. Little purchased Whitehall building; will construct plate-glass front and erect two additional stories for apartments.

Ga., Savannah.—Wilesky & Lichtenstein will erect store and apartment building. (See "Stores.")

Ky., Bowling Green.—Mrs. Pat Patterson is having plans prepared to convert building on State St., between 12th and 13th Sts., into apartment-house; four apartments.

Md., Baltimore.—Client of Francis E. Pegrann, Equitable Bldg., will erect apartment-house at Garrison Ave. and Windsor Mills Rd.; three stories; brick; colonial style; estimated to cost \$20,000 to \$40,000; plans by Henry J. Tinley, 314 N. Charles St., Baltimore.

Va., Richmond.—Pat McDonough will erect two-story brick apartment-house; cost \$7000.

Va., Norfolk.—Gregory & Williamson will erect five brick store and tenement buildings; cost \$15,000.

W. Va., Fayetteville.—Fayette Bottling & Ice Co. will erect store and apartment building. (See "Stores.")

W. Va., Fairmont.—East Side Apartment Co. incorporated with \$25,000 capital stock by W. H. Sands, J. A. Graham and others.

W. Va., Grafton.—R. L. Clark & Co. will erect store and apartment building. (See "Stores.")

W. Va., Montgomery.—Weaver Drug Co. will erect apartment and store building; 55x44 feet; cost \$10,000. (See "Stores.")

ASSOCIATION AND FRATERNAL

Ark., Helena.—Masonic Temple Association incorporated with \$10,000 capital stock to erect Masonic Temple.

Ark., Grafton.—Temple.—Sahara Temple

Ancient Order Nobles of Mystic Shrine, is having plans prepared by Clyde A. Ferrel, Little Rock, Ark., for temple; 54x120 feet; three stories; mill construction; cost \$25,000; date of opening bids not set. (Previously noted.)

Ga., Atlanta.—Negro Independent Order of Odd Fellows of Atlanta and Georgia will erect lodge building; six stories; steel and terra-cotta construction; veneered with pressed brick; stores on first floor; offices on second, third and fourth floors; lodgerooms above; cost about \$100,000.

Md., Hyattsville.—Oriole Lodge, Independent Order of Odd Fellows, will erect temple to cost about \$10,000; Wm. P. Magruder, chairman of building committee.

Miss., Laurel.—Ancient Free and Accepted Masons plan to erect Masonic Temple.

Mo., Independence.—Fraternal Order of Eagles will erect clubhouse.

N. C., Asheville.—Benevolent Protective Order of Elks plans to erect \$25,000 building.

N. C., Asheville.—Benevolent Protective Order of Elks plans to erect \$5,000 building.

Tex., Dallas.—Texas Grand Lodge of Independent Order of Odd Fellows, W. H. Walker, grand secretary, Trust Bldg., Dallas, plans erection of Widows and Orphans' Home.

Tex., Mineral Wells.—Benevolent Protective Order of Elks plans to erect lodge building; C. B. Raines, Cleo Smith and others on building committee.

W. Va., Huntington.—Ancient Free and Accepted Masons will receive bids until May 20 to erect proposed Masonic Temple.

BANK AND OFFICE

Ala., Gadsden.—Cumberland Presbyterian congregation will expend \$4000 to erect edifice recently noted; 33x52 feet; ordinary construction; steam heat; electric lighting. (See "Machinery Wanted.")

D. C., Georgetown.—Farmers and Mechanics National Bank, 31st and M Sts., has plans by Marsh & Peter, 520 13th St. N. W., Washington, for stucco front for bank building.

D. C., Washington.—Riggs Realty Co. will open bids May 22 to erect office and theater building; eight stories and basement; 115x175 feet; fireproof construction; Warren Webster system of heating; electric elevator; cost \$800,000; plans by J. H. de Silburt, Hibbs Bldg., Washington; address proposals to architect. (Previously noted.)

Fla., Miami.—Bank of Bay Biscayne has plans by George L. Pfeifer, Lemon City, Fla., for remodeling and addition to bank building; cost \$30,000; Mr. Pfeifer will also supervise construction; contracts closed. (Recently noted.)

Fla., Tampa.—J. Q. Brantley will erect bank and office building.

Fla., Tampa.—Exchange National Bank is having plans prepared by Biggers & Muller, 901 Empire Bldg., Atlanta, Ga., for bank building; 10 stories; steel and reinforced concrete construction.

Ga., Columbus.—Phenix-Girard Bank will make improvements to bank building, including Italian marble walls, mosaic tile floors, etc.

La., Bogalusa.—Bank of Bogalusa will erect bank building.

Ky., Mayfield.—Farmers' National Bank will erect four-story building.

Church, Rev. John B. Robins, pastor, 140 Trinity Ave., is having plans prepared by W. T. Downing, Prudential Bldg., Atlanta, for edifice; 60x100 feet; gas and electric lighting; heating not determined; cost \$70,000. (Previously noted.)

Ga., Savannah.—Christian Church, Rev. J. A. Erwin, pastor, is having plans prepared by A. A. Artley, Savannah, for edifice; one story and basement; artificial stone; flat roof; turret effect; main auditorium to seat 350; total seating capacity 700; cost \$15,000. (Recently noted.)

Ky., Bowling Green.—Eleventh St. Presbyterian Church will erect edifice; cost \$20,000 to \$25,000. Address The Pastor, Eleventh St. Presbyterian Church.

Ky., Bowling Green.—Second Baptist Church purchased Eleventh St. Presbyterian Church building and will make extensive improvements. Address The Pastor, Second Baptist Church.

Ky., Dixon.—Presbyterian congregation will erect edifice; brick and stone; cost \$20,000. Address The Pastor, Presbyterian Church.

Ky., Dixon.—Baptist congregation will erect edifice; brick and stone; cost \$20,000. Address The Pastor, Baptist Church.

La., New Orleans.—German Evangelical Lutheran Church, Jackson Ave. and Chippewa St., Rev. J. P. Quinns, pastor, will erect \$15,000 Sunday-school building.

La., New Orleans.—Mt. Zion Methodist Episcopal Church will erect edifice; two stories; brick; cost \$8000. Address The Pastor, Mt. Zion Methodist Episcopal Church.

Md., Baltimore.—Contractors estimating on erection of Roland Avenue Methodist Episcopal Church are Gladfelter & Chambers, 202 Woodberry Ave.; U. S. Patterson, 761 W. 36th St.; Fidelity Construction Co., 64 Knickerbocker Bldg., and John K. McIver, 210 Wilson Bldg., all of Baltimore. (Recently noted.)

Md., Hyattsville.—Trustees of Presbyterian church are having plans prepared for edifice. Address The Pastor, Presbyterian Church.

Md., Williamsport.—Zion Lutheran Church, Rev. D. Upton Bair, pastor, has not selected architect to prepare plans for edifice; cost \$12,000; details not determined. (Recently noted.)

Mo., Kansas City.—Budd Park Christian Church, St. John and Brighton Aves., Rev. B. L. Wray, pastor, plans to expend \$25,000 for erection of superstructure over basement.

Mo., St. Louis.—Parish of St. Phillip the Apostle will erect one-story edifice; cost \$21,000. Address The Pastor, Parish of St. Phillip the Apostle.

Okla., Ardmore.—Baptist congregation will erect edifice. Address The Pastor, Baptist Church.

Okla., Clinton.—E. M. Boring, secretary of building committee of Methodist Episcopal Church South, will receive bids until May 8 to erect two-story-and-basement brick church; plans and specifications at office of Mr. Boring at Clinton or of Smith & Parr, architects, Oklahoma City, Okla.

Okla., Tulsa.—Catholic Church, Rev. Father Hierling, pastor, will erect edifice; L. F. J. Rooney, chairman of Building Committee.

S. C., Aiken.—St. Thaddeus Episcopal Church adopted plans for church; cost at least \$23,000; Dr. G. T. Croft, chairman of building committee.

S. C., Pickens.—Methodist Episcopal church South will expend \$10,000 to erect edifice; plans by Wheeler & Stern of Charlotte, N. C.; no contract; Rev. G. F. Kirby, pastor. (Recently noted.)

Tenn., Bristol.—African Methodist Church, Rev. A. L. Patrick, pastor, is having plans prepared by George W. Burnett, Bristol, Va. Tenn., for edifice to replace burned structure; brick; metal roof; steel ceiling; hot-air heat; electric lighting; hardwood finish; cost \$7000. (Recently noted.)

Tenn., Greenville.—Methodist Church, Rev. J. A. Mitchell, pastor, will erect edifice; red pressed brick; stone trimmings; cost \$30,000; construction begun; structure will be 84x64 feet; fireproof construction; steam heat; electric lighting; plans by Pember & Kearnott, Bristol, Tenn.; contract awarded to E. L. Construction Co., Greenville.

Tenn., Knoxville.—St. John's English Lutheran Church is having plans prepared by R. F. Graf & Son, Knoxville, for edifice; cost \$30,000 to \$40,000.

Tex., Gainesville.—First Presbyterian Church will erect edifice. Address The Pastor, First Presbyterian Church.

Tex., Longview.—First Baptist Church, Rev. J. E. Hughes, pastor, will expend \$20,000 to erect edifice; 80x100 feet; buff brick; hot-air or steam heat; will not be ready to receive bids for six months. (Recently noted.)

Tex., Port Lavaca.—Baptist congregation, Rev. Albert Meyers, pastor, will erect edifice; 50x60 feet; brick veneer; glass dome for natural light; cost \$6000.

Va., Berkley, Station Norfolk.—St. Thomas Episcopal Church has plans by Watson & Huckle, Philadelphia, Pa., for \$20,000 edifice. (Previously noted.)

Va., Berkley, Station Norfolk.—St. Thomas Protestant Episcopal Church has plans for proposed edifice. Address The Rector, St. Thomas Episcopal Church.

Va., Norfolk.—Rev. James Owens, Mrs. Frank Anthony Walké and others are interested in erection of edifice to replace Old Donation Episcopal Church.

Va., Bristol.—First Presbyterian Church plans to erect entire church building or Sunday-school auditorium adjoining present edifice. Address The Pastor, First Presbyterian Church.

Va., Lynchburg.—Rivermont Avenue Presbyterian Church will enlarge edifice, increasing capacity one-third. Address The Pastor, Rivermont Avenue Presbyterian Church.

Va., Richmond.—Westminster Presbyterian Church plans to erect \$33,000 edifice. Address The Pastor, Westminster Presbyterian Church.

Va., Wheeling.—Sons of Israel congregation has plans by Mr. Woods of Wheeling for synagogue. Address The Rabbi of Sons of Israel Congregation.

Va., Warwood.—Warwood Christian Church will erect edifice. Address The Pastor, Christian Church.

Va., Huntington.—First Presbyterian Church will erect Sunday-school room; 65x85 feet; to seat about 300; cost \$15,000. Address The Pastor, First Presbyterian Church.

CITY AND COUNTY

Ala., Opelika.—Jail.—Lee County Commissioners will erect jail to replace present structure; Wm. H. Oates, State Prison Inspector.

Ala., Helena.—Fire Station.—City has plans by Mathews & Fry for fire station; 40x100 feet; brick; cost \$6000; Hugh Martin, Mayor. (Recently noted.)

Ala., Augusta.—Hospital.—City is ready to receive plans and specifications from architects for proposed hospital; cost \$125,000; Dr. W. H. Doughty, Jr., dean of college, or Nisbet Wingfield, City Engineer, may be addressed.

Ala., Dalton.—City Hall and Fire Headquarters.—City authorized purchase of site to erect proposed city hall and fire station; cost \$7500 to \$10,000.

Ala., Newman.—Jail and Jailer's Residence. Commissioners of Roads and Revenue of Coweta county will receive bids until noon, May 22 to erect jail and jailor's residence in accordance with plans and specifications on file at office of J. Littleton Jones, clerk, and at office of architect, G. Lloyd Preacher, Augusta, Ga.; plans may be had of architect at his discretion on deposit of \$10; building will be two stories; brick; stone trimmings; tile roof; steam heat; to contain two hospital rooms, two minor cells (three steel cells each), two minor cell rooms (one containing insane padded cell and condemned cell, other female cell and hospital cell), jailor's office, etc.; successful bidder will be required to give surety company's bond in double the amount of bid; usual rights reserved; all proposals must be sealed and addressed to H. C. Glover, chairman County Commissioners Coweta county, and endorsed "Proposals for Jailer's Residence and Jail Building." (Recently noted.)

Ala., Catlettsburg.—City Hall.—City contemplates erection of city hall. Address The Mayor.

Ala., Middlesboro.—City Hall, Fire Department, Jail, etc.—City will open bids May 24 to erect courthouse, city building, fire department and jail; latter to be fireproof construction; hot-water heat; electric lighting; cement sidewalks; 14x126 feet; two stories; cost \$80,000; plans by Baumann Bros., 703 Henson Bldg., Knoxville, Tenn., to whom proposals may be addressed. (Recently noted.)

Ala., Shreveport.—Fair Buildings.—Directors of Louisiana Fair Association will ask city to vote on \$100,000 bond issue for improvements at State fair grounds. (See "Government and State Buildings.")

Tenn., Henning.—Jail.—City will erect jail. Address The Mayor.

Tenn., Kyle.—City Hall.—City is considering plans for city hall. Address The Mayor.

Tenn., Richmond.—Bandstand.—Bids received by Chas. E. Bolling, City Engineer, until May 4 for erection of bandstand in parks. (See "Road and Street Work.")

COURTHOUSES

Ark., Fordyce.—W. T. Graham, J. P. Benton and F. H. Wozencraft, Commissioners, will receive bids until May 25 to erect courthouse for Dallas county; certified check for \$1000; plans and specifications at office of Frank W. Gibbs & Co., architects, 227 Gazette Bldg., Little Rock, Ark., or of Dallas county Clerk at Fordyce. (Previously noted.)

Fla., Miami.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will erect courthouse and post office building. (See "Government and State.")

Ky., Middlesboro.—City will open bids May 24 to erect courthouse, etc., recently noted. (See "City and County.")

La., Mansfield.—De Soto parish voted \$100,000 bond issue to erect courthouse. Address Police Jury. (Recently noted to vote on this issue April 25.)

S. C., Union.—Sealed proposals addressed to Ensile Nicholson, chairman of Courthouse Commission of Union County, will be received until noon June 1 to erect county courthouse; all proposals to be endorsed "Proposals for new County Courthouse"; work and material to conform to plans and specifications on file after May 1 at office of said commission and at office of architect, A. Ten Eyck Brown, 607 Forsythe Bldg., Atlanta, Ga., and at office of architect in charge, L. D. Proffitt, associate architect, Montgomery-Crawford Bldg., Spartanburg, S. C.; copies of drawings and specifications may be obtained from architect at Atlanta on deposit of \$20; copies supplied to subcontractors on deposit of \$10; all bids to be submitted on special proposal blanks furnished by architect and accompanied by certified check for 2 per cent. of amount of bid, made payable to Courthouse Commission of Union County, S. C.; usual rights reserved. (Recently noted.)

Tenn., Chattanooga.—Hamilton county is reported to have authorized Barnwell & Jones, Chattanooga, Tenn., to prepare plans for courthouse. (Previously noted.)

Tex., Aspermont.—Stonewall county voted \$50,000 for courthouse; R. S. Tillotson, County Clerk. (Previously noted.)

Va., Williamsburg.—James City county will rebuild courthouse recently burned; William Lee, chairman of committee. (Recently noted.)

DWELLINGS

Ala., Gadsden.—W. D. Pinckard will erect residence.

Ala., Haleyville.—Dr. R. W. Wood will erect residence.

Ala., Summerville.—J. I. Vale will erect residence.

D. C., Washington.—F. D. McAuliffe has plans by A. B. Mullett & Co., Union Trust Bldg., Washington, for four two-story dwellings at 149-155 North Carolina Ave. S. E.; cost \$12,500; construction by owner.

D. C., Washington.—Virginia Highlands Association will expend \$2000 each to erect 10 five and six-room dwellings; reinforced concrete construction; hot-air heat; electric lighting; plans by Milton Dana Morrill, Corcoran Bldg., Washington; will let subcontracts at once for all work except concrete. (Recently noted.)

D. C., Washington.—Frank Joughans, 3725 Georgia Ave. N. W., has plans by W. Sidney Pittman, 494 Louisiana Ave. N. W., for two two-story brick dwellings at 3721 and 3823 Georgia Ave. N. W.; cost \$3000; construction by owner.

D. C., Washington.—Charles A. Peters, 626 14th St. N. E., has plans by A. H. Beers, 1342 New York Ave. N. W., Washington, for nine two-story brick dwellings at 4101-4113 8th St. and 731-73 Taylor St. N. E.; cost \$15,000; construction by owner.

Fla., St. Augustine.—James Flynn of Cleveland, O., will erect \$9000 residence.

Fla., St. Augustine.—L. J. Boyles, proprietor of Keystone Hotel, will erect 14-room residence.

Fla., Tampa.—D. A. McPherson is having plans prepared by Biggers & Muller, 601 Empire Bldg., Atlanta, Ga., for reinforced concrete dwelling; clay tile roof; cost \$25,000.

Fla., Tampa.—W. R. Page will erect residence; cost \$4000.

Fla., Tampa.—L. D. Patten will erect \$3000 residence.

Fla., Tampa.—J. L. Reed is having plans prepared by H. A. Johnson, Tampa, for residence; two stories; eight rooms; cost \$4000.

Fla., Atlanta.—R. H. Williamson will erect two dwellings; cost \$9000.

Fla., Atlanta.—Mrs. Mary C. Fields will erect dwelling; cost \$5000.

Ga., Atlanta.—Edgewood Trading Co. will erect \$3500 residence.

Ga., Atlanta.—F. S. Hall will erect \$6000 dwelling.

Ga., Atlanta.—Acme Home Builders will erect 18 dwellings; cost \$54,000.

Ga., Atlanta.—W. L. Randall will erect dwelling; cost \$2500.

Ga., Atlanta.—W. E. Wimpy will erect two dwellings; cost \$3500.

Ga., Atlanta.—J. H. Whisenant will erect \$300 dwelling.

Ky., Lexington.—D. C. Hunter will erect residence.

Ky., Louisville.—Hewett Brown will erect residence; cost \$15,000.

Ky., Maysville.—J. W. Bradner will erect residence; cost about \$4000.

Ky., Maysville.—James M. Rains will erect residence; cost about \$4000.

Ky., Winchester.—D. C. Hunter of Lexington, Ky., will erect residence; \$4000.

La., New Orleans.—E. L. Markel will erect two-story frame residence; cost \$3000.

La., New Orleans.—Alfred M. Conway will erect residence; two stories; stucco and cement; cost \$6000.

Md., Baltimore.—Clifford O. Windsor of Glencooe, Md., has plans by Herbert C. Aiken, 223 St. Paul St., Baltimore, for cottage at Ailsa Terrace; two and a half stories; frame; 36x42 feet; front and side porches; hot-water heat; cost \$4000.

Md., Baltimore.—Rochester-Kirkness Realty Co., Section O, Wholesale Market, purchased site on Curley, Potomac, Lombard and Hare Sts., and will erect 165 dwellings; to cost about \$300,000; will erect 40 on Potomac St. and 40 on Hare St. at once at cost of \$110,000; plans by owner.

Md., Baltimore.—Nadum Adlin is having plans prepared by Stanislaus Russell, 2900 Clifton Ave., Baltimore, for 10 three-story pressed-brick dwellings in 3100 block Calvert St.; cost \$60,000.

Md., Baltimore.—S. Stewart, 2814 Clifton Ave., will erect two-and-a-half-story frame cottage at West Arlington.

Md., Baltimore.—Millard F. Burgess of John E. Hurst & Co., 39 Hopkins Pl., will erect residence at Roland Heights.

Md., Baltimore.—Edward J. Gallagher Realty Co., 625 Rose St., will erect five dwellings, 13x30 feet, at Foster and Glover Sts. to cost \$4000, and 12 dwellings, 12x28 feet, on Glover St. to cost \$8000; two stories; brick; Carey roofing; furnace heat.

Md., Baltimore.—Forest Park Co., Maryland Telephone Bldg., is having plans prepared by W. H. Eisenbrandt, 511 Maryland Telephone Bldg., Baltimore, for cottage on Hawthorn Ave., between Carlisle and Grenada Aves.; two and a half stories; frame; 32x32 feet; cost \$4000.

Md., Baltimore.—L. B. McCabe, York Rd. and McCabe Ave., has plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for twin cottages on McCabe Ave.; two and a half stories; hot-water heat; cost \$7500; R. B. Mason, 210 E. Lexington St., Baltimore, is estimating.

Md., Baltimore.—James Keelty, Baltimore St. west of Gorman Ave., has plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for 12 dwellings, 14x57 feet, on Edmondson Ave. near Calverton Rd., and six dwellings, 14x56 feet, on Edmondson Ave. near Duke-Land Ave.; two stories; tin roofs; hot-air heat; cost \$30,000.

Md., Baltimore.—Samuel Albert Whiting, 908 20th St., will have plans prepared by Wm. A. Foreman, 1919 Kennedy Ave., Baltimore, for two-and-a-half-story frame cottage.

Md., Baltimore.—Arthur H. Benhoff, 205 W. Lombard St., will erect dwelling at Beulah Villas; 10 rooms; frame; steam heat; electric lighting; cement sidewalks; cost \$4500; construction will not begin for several months.

Md., Baltimore.—Lenox Company, Charles and Lexington Sts., has plans by J. R. Forsyth, 232 St. Paul St., Baltimore, for residence; two and a half stories; 28x38 feet; ordinary construction; frame; slate roof; hot-water heat; gas and electric lights; cost \$6000; L. J. Brown of Pimlico, Md., is building.

Md., Baltimore.—Frank Novak, 2728 Jefferson St., will expend \$25,000 to erect 16 dwellings and two stores and dwellings combined; four 14x50 feet; fourteen 12 feet 6 inches by 15 feet; ordinary construction; furnace; gas and electric lighting; cement sidewalks; plans by Joseph F. Hirt, 2707 Jefferson St., Baltimore; construction by owner. (Recently noted.)

Md., Baltimore County.—Clifford O. Windsor, Glencooe, Baltimore county, has plans by

Herbert C. Aiken, 223 St. Paul St., Baltimore, for dwelling on Allsa terrace, Harford Rd.; 36x42 feet; hot-water heat; gas and electric lighting; cost \$2500.

Md., Baltimore.—James F. Amos has plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for three dwellings on Boyd St. near Pulaski St.; brick; 15x36 feet; tin roof; hot-air heat; cost \$3600.

Md., Baltimore.—Daniel Donnelly, 1220 Montford Ave., will erect 12 two-story pressed-brick front dwellings on Oliver St. near Montford Ave.; 14x45 feet; cost \$20,000.

Miss., Iuka.—Tishomingo Country Estate will erect seven cottages in connection with development of club resort; plans not determined. (See "Miscellaneous Structures.")

Miss., Laurel.—J. S. Pleasants, superintendent of Laurel Cotton Mills, will erect residence; cost \$4000.

Mo., Kansas City.—W. E. Griffin will expend \$3000 to erect 23x30-foot dwelling; hot-air heat; electric lighting; granitoid sidewalks; plans and construction by owner. (Recently noted.)

Md., Roland Park.—Roland Park Company, 408 Roland Ave., has plans by Howard Sill, 11 E. Pleasant St., Baltimore, Md., for six dwellings to be known as Northfield Court; constructed to face central court and surrounded by brick wall; general entrance; English type brick; hot-water heat; electric lights; cost \$100,000.

Miss., Gulfport.—W. D. Barry will expend \$5000 to erect dwelling; 38x38 feet, with wing 18x20 feet; brick veneer; mill construction; hot-air heat; gas and electric lighting; plans by owner; day labor; contracts for furnace, mantels and brick not let; construction begun. (Recently noted.)

N. C., Charlotte.—C. E. Mason has plans by F. L. Bonfoey, Charlotte, for three bungalows; 32x54 feet each; frame; stained shingles and blue brick; air furnace; electric lighting; cost \$2000 each; date of opening bids not set. (See "Machinery Wanted.")

N. C., Cherryville.—J. M. Beam will erect residence to replace burned structure; construction begun.

N. C., High Point.—George T. Penny contemplates erecting residence and install private water-supply system.

N. C., Judson.—Whiting Manufacturing Co., Asheville, N. C., is having plans prepared by Smith & Carrer, Asheville, for two dwellings.

N. C., Hendersonville.—Sam T. Hodges will erect two cottages; cost \$400.

Okla., Muskogee.—E. A. Ford of Lexington, Ky., will erect nine cottages and bungalows.

S. C., Manning.—Presbyterian church, Rev. A. R. Woodson, pastor, will open bids soon for erection of manse; 37x37 feet; ordinary construction; hot-air furnace; electric lighting; cement sidewalks; cost \$3000. (See "Machinery Wanted.")

Okla., Oklahoma City.—A. F. Stewart will erect two-story frame dwelling.

Okla., Oklahoma City.—J. M. Morris will erect two-story frame dwelling; cost \$400.

Okla., Oklahoma City.—F. A. Gordon will erect one-story frame dwelling; cost \$3500.

S. C., Carlisle.—William H. Gist has plans by J. S. Starr, Rock Hill, for dwelling; nine rooms.

S. C., Kershaw.—T. C. Nelson is having plans prepared by J. S. Starr, Rock Hill, for nine-room dwelling. *

S. C., Manning.—Dr. H. L. Wilson will probably award contract to Z. G. Sprott of Manning to erect dwelling; eight rooms; ordinary construction; heating and lighting undecided; plans also by Mr. Sprott. (Recently noted.)

Tenn., Bristol.—Dr. W. C. Reser is having plans prepared by George W. Burnett, Pyle Bldg., Bristol, Va.-Tenn., for residence; frame; metal roof; hot-water heat; electric lighting; hard wood finish; cost \$5000.

Tenn., Chattanooga.—J. C. Howell has plans by J. G. Barnwell & Clarence T. Jones, Chattanooga, for residence on Fort Wood; brick; 10 rooms.

Tenn., Chattanooga.—James F. Finley, James Bldg., is having plans prepared by J. G. Barnwell and Clarence T. Jones, Chattanooga, for residence; eight rooms; two stories; two bathrooms; brick veneer construction; metal roof; hot-air heat; hard pine interior finish; gas and electric lighting; cost \$8000.

Tenn., Columbia.—Skelley & Harbison will erect residence.

Tenn., Elizabethton.—George Edward Campbell is having plans prepared by George W. Burnett, Pyle Bldg., 6th and State Sts., Bristol, Va.-Tenn., for two-story dwelling; first story stone; second story creosoted shingles; beveled plate and leaded glass;

tile hearths and mantels; metal roof; hot-water heat; cost \$5000 to \$6000.

Tenn., Nashville.—Dr. R. O. Tucker will erect three four-room dwellings; cost \$3000.

Tenn., Nashville.—L. E. McCarty will erect two-story brick residence; cost \$7000.

Tenn., Dallas.—R. H. Stewart will expend \$7500 to remodel residence at 3701 Gaston St.

Tenn., Galveston.—Theophilus Conzelman, St. Louis, Mo., will erect bungalow; cost \$10,000.

Tenn., Houston.—J. T. Figg and Howard E. Figg will erect seven dwellings; seven and eight rooms each.

Tenn., Marfa.—John Livingston will erect residence.

Tenn., Orange.—Methodist Church will erect parsonage. Address The Pastor, Methodist Church.

Tenn., Port O'Connor.—Port O'Connor Townsite Co. is having plans prepared by Hull & Praeger, Victoria, Tex., for 12 cottages.

Tenn., Sherman.—R. E. Smith will erect residence.

Tenn., Lynchburg.—J. A. Anderson will erect residence; brick veneer; cost \$20,000.

Tenn., Meadow View, R. F. D., No. 1.—W. L. Preston is having plans prepared by George W. Burnett, Pyle Bldg., Bristol, Va.-Tenn., for dwelling; frame; slate roof; tile hearths; cabinet mantels; hardwood finish; hot-air heat; acetylene-gas lighting; cost \$4500.

Tenn., Newport News.—George A. Spinkel will erect residence.

Tenn., Richmond.—W. H. Richardson will erect detached two-story brick dwelling; cost \$4500.

Tenn., Richmond.—C. W. Davis and R. L. Bailey will erect two-story brick tenement-house (two dwellings); cost \$9000.

Tenn., Richmond.—Pat McDonough will erect two-story brick dwelling; cost \$8000.

Tenn., Richmond.—E. Leslie Powell will erect two-story brick dwelling; cost \$8000.

Tenn., Elm Grove.—Christian Stoehr will erect six-room bungalow.

GOVERNMENT AND STATE

Ark., Little Rock.—Asylum.—Governor Donaghey states that Legislature has not so far passed appropriation bill of \$100,000 for annex to State Insane Asylum. (Recent report an error.)

Tenn., Washington.—Museum.—War Department will receive bids in duplicate until 2 P. M. May 6 for repairs at Army Medical Museum at 7th and B Sts. N. W.; information from M. R. Thorp, chief of supply division.

Fla., Miami.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will erect court-house and postoffice building; four stories; basement to have boiler-rooms, janitor's closets, etc.; male postoffice building 62x43 feet; courtroom 43x63 feet; H. C. Budge, postmaster.

Ky., Ironton.—Armory.—Armory Commission, Frankfort, Ky., will not erect or remodel building as armory. (Recent report incorrect.)

La., Shreveport.—Fair Buildings.—Directors of Louisiana Fair Association will ask city to vote on \$100,000 bond issue for permanent improvements at State fair grounds, including steel grandstand, live-stock coliseum and machinery building. *

Mo., Kansas City.—Plaza Leashold & Investment Co., A. L. Cooper, Hugh F. Tighe, James O. Griggs and John R. Flynn, directors, is having plans prepared by Clifton B. Sloan, Kansas City, for proposed hotel at Main and 2nd Sts.; seven stories; fireproof; 117x117 feet; 300 rooms, all with running water; steel and concrete; seven stores on first floor; cost \$250,000.

N. C., Asheville.—Loughran Hotel Co. organized by Frank Loughran and W. C. Hawk is having plans prepared by R. C. Smith, Asheville, for improvements to Swannanoa Hotel, including remodeling, enlarging and installation of 36 additional bathrooms.

N. C., Judson.—Whiting Manufacturing Co., Asheville, N. C., is having plans prepared by Smith & Carrer, Asheville, for hotel.

N. C., Raleigh.—Jones & Bailey opened bids to erect hotel; John H. Pierce of Norfolk, Va., is lowest bidder; six stories; 55x105 feet; cost about \$65,000. (Previously detailed.)

Tenn., Bryan.—J. T. Maloney, proprietor of Exchange Hotel, has plans by Herbert S. Green, San Antonio, Tex., for hotel; cost \$30,000.

Tenn., El Campo.—Welder, Buhler & Holland, Victoria, Tex., will erect business and hotel annex building. (See "Stores.")

Tenn., Fort Worth.—J. O. Conway-Hutchins,

Tenn., Austin.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will erect postoffice building.

Tenn., Bonham.—Federal Building.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will award contract about June 1 to erect proposed Federal building.

Tenn., Terrell.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., opened bids to erect postoffice; Fell & Ainsworth, Waco, Tex., were lowest bidders at \$42,000.

Tenn., Wichita Falls.—Postoffice.—Treasury Department, office of Supervising Architect, Washington, D. C. Sealed proposals will be received until 3 P. M. June 6, and then opened, for construction, complete (including plumbing, gaspiping, heating apparatus, electric conduits and wiring), of United States postoffice at Wichita Falls, in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Wichita Falls, Tex., or at this office, at discretion of supervising architect.

HOTELS

D. C., Washington.—Lewis Hotel Co., Hotel Richmond, 17th and H Sts. N. W., will erect Powhatan hotel on 18th St. N. W.; cost, including site and furnishings, about \$350,000.

Fla., Jacksonville.—Robert W. Simms will remodel Victoria Hotel; plans by J. B. Walsh, Jacksonville, call for remodeling and rebuilding portion of exterior with pressed brick and stucco; rebuild exterior walls from second to third floor, erect additional story, install mezzanine floors, marble wainscoting extending half-way from floor to ceiling, marble desks and stairways leading to upper floors; 20-passenger electric elevator; install additional baths, electric lights, steam heat, etc. (Mr. Simms recently noted to receive bids at once to remodel.)

Fla., Lakeland.—J. H. A. Bruce is reported as interested in erection of proposed \$75,000 hotel.

Fla., Pass-a-Grille.—S. D. Hollenbeck will erect hotel; 73x109 feet; two stories; 30 rooms; 16 baths; electric lights; steam heat; laundry; will also build bulkhead and provide dock.

Fla., St. Petersburg.—Edgar Ferndon, architect, St. Petersburg, Fla., will receive bids until May 15 to erect Bon Homie Hotel; plans and specifications at office of architect as above.

Fla., St. Petersburg.—A. N. Moloche will erect hotel on Pine Key; 100 rooms.

Fla., Tampa.—Biggers & Muller, 601 Empire Bldg., Atlanta, Ga., is preparing plans for reinforced concrete hotel; details not determined.

Fla., Atlanta.—Byron Sonders is having plans prepared by J. R. MacEachron, 932 Candier Bldg., Atlanta, for proposed apartment hotel. (See "Apartment-houses.")

Fla., Lakeland.—A. Y. Thompson is receiving bids to erect \$30,000 brick hotel.

Fla., Valdosta.—D. C. Ashley and C. R. Ashley, both of Valdosta, and J. M. Ashley of Douglas, Ga., will erect annex to Valdosta Hotel which will practically double capacity.

Fla., Vidalia.—R. L. King will erect addition to Colonial Hotel.

Miss., Iuka.—Tishomingo Country Estate will make improvements to hotel; plans not determined. See "Miscellaneous Structures."

Mo., Kansas City.—Plaza Leashold & Investment Co., A. L. Cooper, Hugh F. Tighe, James O. Griggs and John R. Flynn, directors, is having plans prepared by Clifton B. Sloan, Kansas City, for proposed hotel at Main and 2nd Sts.; seven stories; fireproof; 117x117 feet; 300 rooms, all with running water; steel and concrete; seven stores on first floor; cost \$250,000.

N. C., Asheville.—Loughran Hotel Co. organized by Frank Loughran and W. C. Hawk is having plans prepared by R. C. Smith, Asheville, for improvements to Swannanoa Hotel, including remodeling, enlarging and installation of 36 additional bathrooms.

N. C., Judson.—Whiting Manufacturing Co., Asheville, N. C., is having plans prepared by Smith & Carrer, Asheville, for hotel.

N. C., Raleigh.—Jones & Bailey opened bids to erect hotel; John H. Pierce of Norfolk, Va., is lowest bidder; six stories; 55x105 feet; cost about \$65,000. (Previously detailed.)

Tenn., Bryan.—J. T. Maloney, proprietor of Exchange Hotel, has plans by Herbert S. Green, San Antonio, Tex., for hotel; cost \$30,000.

Tenn., El Campo.—Welder, Buhler & Holland, Victoria, Tex., will erect business and hotel annex building. (See "Stores.")

Tenn., Fort Worth.—J. O. Conway-Hutchins,

manager of La Salle Hotel, Chicago, Ill., is reported to erect hotel to contain 400 rooms.

Tenn., Waco.—E. Tietz will erect addition to hotel; three stories; stores on first floor; 30 rooms above.

MISCELLANEOUS

Ala., Roanoke-Barn.—T. L. Belcher & Co. will erect stock barn; brick construction.

Ark., Harrisburg.—Fair Building.—Polkett County Fair Association, J. W. Rooks, president, will soon award contracts for construction of racetrack and erection of grandstand and other buildings at fair grounds.

Ga., Augusta.—Orphanage.—Augusta Orphanage Asylum has not determined upon plans to erect orphanage. (Recently noted.)

La., Alexandria.—Natatorium.—Kent County awarded contract to Clifford Well Co., Texarkana, Ark., to drill 2300-foot magneto salt well to supply water for natatorium to be erected; contract was recently incorrectly noted awarded for natatorium. (See "Machinery Wanted.")

Md., Baltimore.—Clubhouse.—Phoenix Club is having plans prepared by Theodore Wells Pletsch, American Bldg., Baltimore, for alterations and improvements to clubhouse on Eutaw Pl. near Dolphin St., including re-decorating and re-frescoing.

Md., Catonsville.—Parish-house.—Salem Lutheran Church has plans by Walter M. Gleske, Gunther Bldg., Baltimore, Md., for parish-house on Newberry Ave.; two stories; frame and stucco; slate roof; hot-water heat; contractors estimating are Henry Nagle, Wm. C. Epsey and Fred Maisel, all of Catonsville.

Md., Catonsville.—Hospital.—Maryland Hospital for Insane, J. Percy Wade, superintendent, contemplates erection of wing 46x114 feet for 75 additional patients, industrial shop for women, and nurses' quarters; double kitchen 70x80 feet, with cold-storage plant.

Md., Ruxton.—L'Hirondelle Club of Ruxton Incorporated; John Redwood, president; will erect clubhouse.

Md., Western Run.—Armory.—Boy Scouts of America have plans by A. Lowther Forrest, 411 St. Paul St., Baltimore, Md., for armory; one and a half stories; tile and tin roof; iron work; concrete foundation; R. Mason, 210 E. Lexington St., Baltimore, Md., is building.

Miss., Iuka.—Clubhouse, etc.—Tishomingo Country Estate will open bids in June to erect country club, seven cottages, improvements to hotel, etc., in connection with development of club resort; ordinary construction; direct steam heat; cost of clubhouse, \$35,000; plans for other improvements not determined; Whilldin & Price, 711 Title Guarantee Bldg., Birmingham, Ala., are preparing plans. (J. Gay Thompson of Birmingham, Ala., and others recently noted interested.)

Mo., St. Louis.—Hospital.—John P. Hermann, 1011 Market St., will expend \$30,000 to remodel old dwelling as hospital; three stories; 45x60 feet; 18 rooms; ordinary construction; furnace; gas and electric lighting; no contract. (Recently noted.)

Mo., St. Louis.—Grandstands.—American League Baseball Club will erect two grandstands 180x50 and 150x50 feet; cost \$20,000.

N. C., Greensboro.—Masonic Home.—Dr. F. M. Winchester, secretary and treasurer, Charlotte, N. C., will receive bids until noon May 18 to erect Masonic and Eastern Star Home near Greensboro for indigent Masons, wives and widows; ordinary construction; fire doors; 40 rooms, kitchen, dining-room and basement; heating and lighting not determined; cost \$15,000 to \$20,000; plans and specifications at offices of Richard N. Hackett, Wilkesboro, N. C.; L. M. Clymer, Greensboro, and Hook & Rogers, architects, Charlotte, N. C. (Previously noted.)

N. C., Statesville.—Sale Barn.—C. E. Daniels will erect sale barn.

Okla., McAlester.—Hospital.—All Saints Hospital, Dr. James C. Johnston, superintendent, will open bids about May 15 to erect additional wing to hospital recently noted; 56x35 feet; fireproof construction; steam heat; electric lighting; patients' elevator; cost \$15,000; plans by Walsh & Moore, McAlester. (See "Machinery Wanted.")

S. C., Greenwood.—Hospital.—Hospital Association accepted plans by Sayre & Baldwin, Anderson, for hospital and will receive bids until May 9; 24 beds; cost about \$650; W. V. Blyth, J. S. Bailey and W. P. Durst, building committee.

Tenn., Memphis.—Hospital.—Memphis Neal Institute Co. incorporated with \$50,000 capital stock by A. H. Evans, J. S. Tobin, S. A. Person and others.

Tenn., Memphis.—Stock Yards.—Memphis Stock Yards Co. organized with \$150,000 capital stock by D. Darnell, C. R. Hazel, C. J.

Lowrance and others; are negotiating for 40 acres of land for \$100,000, and plans to erect buildings, etc., to cost \$60,000 to \$70,000.

Va., Norfolk—Clubhouse.—Norfolk Boat Club, Albert Roper, commodore, plans to erect \$60,000 clubhouse.

Va., Richmond—Clubhouse.—Westmoreland Club, John G. Farland, president, rejected original plans to expend \$20,000 to erect two-story addition, etc., but will erect "L" 16x17 feet, enlarge reception-room and dining-room, install elevator; cost of improvements \$9000. (Original plans previously mentioned.)

Va., Richmond.—Richmond & Henrico Railway Co. will erect brick addition to car barn; cost \$5000.

Va., Virginia Beach—Pavilion.—Norfolk Southern Railroad, F. L. Nicholson, chief engineer, Norfolk, Va., has plans by Neff & Thompson, Norfolk, for pavilion; bungalow type; three buildings connected by covered promenade; auditorium at north end, with bathhouse and bowling alley adjoining; cafe and dining-room in center and ballroom surrounded by veranda and enclosed in glass at south end; estimated cost about \$50,000. (Previously noted.)

W. Va., Wheeling—Market Auditorium.—Market Auditorium Co. incorporated with \$100,000 capital stock by Geo. E. Lutz, H. W. McClure, Geo. E. Stifel and others; will erect market-house to replace present market. (Recently noted.)

RAILWAY STATIONS

Ala., Eufaula.—Central of Georgia Railroad, C. K. Lawrence, chief engineer, Savannah, Ga., will erect depot.

Ark., Helena.—Missouri & North Arkansas Railroad, S. W. Lee, consulting engineer, Eureka Springs, Ark., will probably erect \$25,000 depot.

Ga., Barnesville.—Central of Georgia Railway, C. K. Lawrence, chief engineer, Savannah, Ga., is reported to erect \$25,000 depot.

N. C., Thomasville.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., has not fully determined plans for railway station. (Recently reported.)

Okla., Idabel.—St. Louis & San Francisco Railway, F. G. Jonah, chief engineer, St. Louis, Mo., will erect brick depot.

Okla., Muskogee.—St. Louis & San Francisco Railway, F. G. Jonah, chief engineer, St. Louis, Mo., will erect freight depot; 325x80 feet; concrete piers with protection shed.

Tex., Bailey.—St. Louis Southwestern Railway, C. D. Purdon, chief engineer, Tyler, Tex., will erect passenger station; mill construction; work will be done by company's force. (Recently noted.)

Tex., Galveston.—Galveston-Houston Electric Co., L. C. Bradley, president, Galveston, is reported to erect terminal station.

Tex., Taylor.—Missouri, Kansas City & Texas Railway of Texas, S. B. Fisher, consulting engineer, St. Louis, Mo., will remodel and make extension to present depot.

Tex., Taylor.—Missouri, Kansas & Texas Railroad, S. F. Fisher, constructing engineer, St. Louis, Mo., will erect depot and station-house.

Tex., Tyler.—St. Louis Southwestern Railway of Texas, W. T. Eaton, chief engineer, Tyler, will erect passenger and freight station; pressed brick; stone trimmings; cost \$12,500.

SCHOOLS

Ala., Albertville.—Seventh District Agricultural School, J. B. Hobdy, president, will erect dormitory.

Ala., Attalla.—City voted \$16,000 bond issue for school improvements. Address The Mayor.

Ala., Anniston.—Presbyterian College will expend \$35,000 for improvements and enlargements.

Ala., Cuba.—City will vote May 27 on \$10,000 bond issue to erect brick school. Address The Mayor.

Ala., East Lake, Station Birmingham.—Alabama Boys' Industrial School, Mrs. R. F. Johnston, president, will erect machinery hall; cost \$10,000 to \$15,000.

Ala., Eldridge.—Home Mission Board of Southern Baptist Convention, Rev. A. E. Brown, superintendent mountain work, Asheville, N. C., will erect dormitory to accommodate 30 girls. (See "Machinery Wanted.")

Ark., Helena.—School Board is having plans prepared by Matthews & Fry, Helena, for high-school building; cost \$75,000 to \$100,000.

Ark., Stuttgart.—School District No. 22, G. W. Fagan, president School Board, will expend \$38,000 to erect school building; ordinary construction; cost of heating plant,

\$6000; electric lighting; plans by Mitchel Seligman, Pine Bluff, Ark.; bids opened. (Recently noted.)

Ga., Cave Springs.—Georgia School for Peaf and Dumb is having plans prepared by J. G. Barnwell and Clarence T. Jones of Chattanooga for remodeling two school buildings; cost about \$12,000. (Recently noted to erect laundry.)

Ga., Fort Valley.—City voted \$10,000 bond issue to erect school, etc. Address The Mayor. (See "Sewer Construction.")

Ga., Norwood.—City plans to erect brick school to replace structure reported burned; cost \$13,000 to \$14,000. Address The Mayor.

Ga., Blakely.—City voted \$60,000 bond issue to erect school building and improve sewerage. Address The Mayor. (Recently noted to vote on this issue April 22.)

Ga., Rome.—Berry School, Miss Martha Berry, president, plans to erect chapel, dormitory and other buildings.

Ky., Barbourville.—Home Mission Board of Southern Baptist Convention, Atlanta, Ga., will erect dormitory at Barbourville Institute for 100 boys; brick; steam heat; further information may be had of Rev. J. H. Blackburn.

La., Arcadia.—Bienville Parish School Board ordered election to vote June 27 in seven districts on special school tax to erect schools; will erect five buildings during the summer.

La., Plaquemine.—Joseph Wilbert, president School Board of Iberville parish, may be addressed relative to erection of high school building. (Recently reported.)

La., saline.—Town will erect \$6000 school to replace burned structure. Address Bienville Parish Board of Education.

Miss., Ellisville.—Jones County Agricultural High School Trustees opened bids to erect main building; are considering bids of T. P. Crymes and T. J. Oliver of Hattiesburg, Miss.

Miss., Hattiesburg.—City voted \$40,000 bond issue to erect \$35,000 high-school building, etc. Address The Mayor. (Previously noted.)

Miss., Newton.—City voted \$25,000 bond issue to erect school. Address The Mayor. (Recently noted to vote on this issue April 26.)

Miss., Newton.—City voted \$25,000 bond issue to erect brick school. Address The Mayor. (Previously noted.)

Mo., Rolla.—Executive Committee, School of Mines and Metallurgy of University of Missouri, will receive competitive drawings until 9 A. M. May 25 for fireproof library and assembly hall; programs governing competition on application to Edward Kahlbaum, secretary of Mines and Metallurgy.

Mo., Carrollton.—School Board, E. E. Farnham, clerk, will receive bids until 8 P. M. May 12 to erect two brick schools and installation of heating plants in three buildings and plumbing in one building; certified check for 1½ per cent. of bid, payable to order of W. E. Hudson, treasurer of Board; bids to be submitted on regular form furnished by architect; plans at office of clerk as above, or of Sanneman & Van Tromp, architects, Kansas City, Mo.

Mo., St. Louis.—Principia College, 5544 Minerva Ave., has plans by Wm. B. Ittner, St. Louis, for dormitory building; three stories; brick; 42x126 feet; cost \$70,000.

Mo., Trenton.—Board of Public Education, C. A. Foster, secretary, will make improvements to school buildings. (Recently noted to have voted \$15,000 bond issue.)

N. C., Lumberton.—Robeson county will vote May 9 on establishment of farm-life school to cost \$25,000. Address County Commissioners.

N. C., Scotland Neck.—City is having plans prepared by John C. Stout, Rocky Mount, N. C., for school to replace burned structure; brick construction; cost \$20,000.

Okla., Brinkman.—Brinkham school district voted \$22,000 bond issue to erect school building. Address District School Trustees.

S. C., Dillon.—City voted \$23,000 bond issue to erect school building. Address The Mayor. (Previously noted.)

S. C., Greenville.—Board of School Trustees ordered election May 24 to vote on \$40,000 bond issue for improvements to schools (including installation of heating plants) and erection of new school building; P. T. Hayne, James F. Mackey and Jesse R. Smith, trustees. (Recently noted.)

S. C., Greenville.—City will vote May 24 on \$40,000 bond issue to erect school; T. Q. Donaldson, president board of school trustees.

S. C., Lebanon.—City plans to erect school. Address The Mayor.

S. C., McCormick.—City will vote May 6 on \$12,000 bond issue to erect school; 10 classrooms; ordinary construction; plans not made; address proposals to F. C. Robinson. (Recently noted.)

S. C., Pickens.—J. C. Garrett, Norris, S. C., may be addressed relative to erection of dormitory for girls at Six-Mile Academy; to accommodate 40 pupils; fireproof; concrete floors; 30x100 feet; cost \$30,000.

Tenn., Benton.—Polk County Commissioners are having plans prepared by R. F. Graf, Knoxville, Tenn., for proposed high-school building. (Recently noted.)

Tenn., Chattanooga.—Bonny Oaks School Trustees are having plans prepared for additional building to accommodate about 30 boys; brick; cost \$8000.

Tenn., Ducktown.—Polk County Commissioners are having plans prepared by R. F. Graf, Knoxville, Tenn., for high-school building. (Recently noted.)

Tenn., Johnson City.—Washington College will rebuild dormitory recently reported burned; loss \$20,000.

Tenn., Watertown.—City will erect \$10,000 school; R. J. Turney, director.

Tex., Emma.—Emma School District contemplates issuance of \$15,000 of bonds to erect school. Address District School Trustees.

Tex., Grapeland.—Grapeland school district will vote May 27 on \$10,000 bond issue to erect school. Address District School Trustees.

Tex., Gorman.—City is having plans prepared by Brickey, Bryan & Brickey, 1313 Praetorian Bldg., Dallas, for high-school building.

Tex., Kerens.—City will open bids about May 15 to erect school building; cost \$18,000; plans by Brickey, Bryan & Brickey, 1313 Praetorian Bldg., Dallas, Tex. (Recently noted.)

Tex., Kerens.—City sold \$16,800 of bonds, and will erect school. Address The Mayor.

Tex., Kilgore.—City will probably vote again on \$10,000 bond issue to erect brick school; previous election declared invalid. (Address The Mayor.)

Tex., Moran.—Moran Independent School District will open bids middle of May to erect school building to cost \$10,000; address proposals to M. D. Bray. (Recently noted to have voted \$10,000 bond issue.)

Tex., Port Arthur.—City will vote May 6 on \$25,000 bond issue for school improvements. Address The Mayor.

Tex., Prairie Hill (not a postoffice).—J. D. Farmer, Aledo, Tex., may be addressed relative to rebuilding public-school building previously reported burned.

Tex., Richmond.—Chappell Hill College Trustees plan to erect college building; J. H. P. Davis is interested.

Tex., Taylor.—Public School Trustees plan to issue \$15,000 of bonds for school improvements.

Tex., Teague Independent School District will erect school building; ordinary construction; hot-air heat; electric lighting; cost \$8000; date of opening bids not determined. Address proposals to J. W. Davis. (Previously noted to vote \$10,000 bond issue.)

Va., Danville.—School Trustees rejected all bids for erection of proposed school. (Previously noted.)

Va., Jamestown.—Jamestown District School Board, Williamsburg, Va., will erect consolidated school in Precinct No. 1 at Five Oaks; T. H. Stryker, J. B. Vaiden and B. S. Scott, members of School Board.

Va., Portsmouth.—Hebrew Free School managers plan to erect two-story brick school.

Va., Richmond.—City is having plans prepared by Carnel & Johnson, Richmond, for several school buildings; C. P. Walford, clerk.

Va., Wytheville.—City voted bond issue to erect high-school building. Address The Mayor.

W. Va., Athens.—State Board of Control will receive bids until noon May 22 to erect two-story-and-basement fireproof Normal school building, according to plans and specifications filed at following places: Offices of Bluefield Telegraph, Bluefield, W. Va.; Herald Dispatch, Huntington, W. Va.; Dispatch News, Parkersburg, W. Va.; Wheeling Intelligencer, Wheeling, W. Va., and State Board of Control, Charleston, W. Va.; certified check for \$500 to accompany all bids and addressed to State Board of Control and plainly marked "Bid on Concord Normal School Building;" heating and plumbing to be let separately; usual rights reserved. (Recently noted.)

W. Va., Huntington.—Board of Education is receiving bids for erection of proposed school; eight rooms; cost \$20,000.

STORES

Ala., Birmingham.—Drennen Company will erect store building; seven or eight rooms; site 100x140 feet; cost about \$200,000.

Ala., Birmingham.—R. D. Burnett Cigar Co. has plans by Harry Wheelock, Birmingham, for business building; three stories and basement; fireproof; concrete floors; 30x100 feet; cost \$30,000.

Ala., Oneonta.—Bynum Bros. will erect store building.

Fla., Bartow.—Charles E. Earnest Mercantile Co. will erect store building; two stories; brick; elevator.

Fla., Ocala.—Roess Lumber Co. will erect business building.

Fla., Jacksonville.—E. D. Gilliard will erect two-story brick building.

Fla., Sarasota.—Tonnellin Bros. will erect business building.

Fla., Tampa.—Abe Maas will erect business building.

Ga., Atlanta.—S. H. Kress & Co., 396 Broadway, New York, purchased 68 additional feet and will erect addition to store building.

Ga., Savannah.—Wilemsky & Lichtenstein will erect store and apartment building; two stories; store on first floor; apartments above.

Ga., Vidalia.—James McNatt and E. T. McBride, both of Alley, Ga., and W. O. Donovan of Vidalia will erect building and conduct farmers' supply establishment.

Ky., Catlettsburg.—G. W. Gunnellini will erect business building; three stories; brick; stone trimmings.

La., Houma.—Joseph Iacuzzo will erect two-story concrete business building; construction begun.

Md., Baltimore.—Distillers' Distributing Co. of New York, local office 124 W. Baltimore St., purchased six-story warehouse at 106 W. Baltimore St., and will expend about \$5000 for improvements.

Md., Baltimore.—Frank Novak, 2728 E. Jefferson St., will erect two stores; upper floors for dwellings; construction by owner. (See "Dwellings.")

Md., Baltimore.—J. Henry Miller, 108 Dover St., has plans by C. M. Anderson, 324 N. Charles St., Baltimore, for business building at Eutaw and Franklin Sts.; four stories; brick; slate roof; steam heat; gas and electric lights; cost \$20,000; owner is receiving sub-bids.

Miss., Seminary.—Richard T. Taylor has plans for two-story brick store and office building.

Mo., St. Louis.—William Ratienn will erect two-story store and tenement-house; cost \$3000.

Mo., St. Louis.—May Department Stores Co. is reported as having plans prepared by Mullan & Russell, St. Louis, for store and office building; structural steel, with brick walls and concrete floors; first, eight floors for May Department Stores Co., upper floors for offices; estimated cost \$6,000,000 to \$7,000,000. (Previously more fully described.)

N. C., Asheville.—S. Lipsky, proprietor of Bon Marche Store, leased Berkley Hotel and will convert into store building.

N. C., Charlotte.—F. D. Alexander will erect one-story-and-basement business building; 52x73 feet; mill construction; electric lighting; Berger vault lights; cost \$6500; day labor. (See "Machinery Wanted.")

N. C., Hendersonville.—George W. Ragan, Gastonia, N. C., will erect business building.

N. C., Hendersonville.—D. S. Pace will erect business building; cost \$5000.

N. C., Marshall.—Shelton-Ebbs Wholesale Grocery Co. organized by Bowles, Shelton, P. O. Ebbs and others; will erect brick business building.

N. C., Morganton.—Pitts & Giles will erect double store building.

N. C., Winston-Salem.—Messrs. Gorrell will erect six store buildings; stone and brick.

N. C., Newbern.—Francis Duffy will erect one or more brick buildings.

Okla., Tulsa.—J. M. Gillette will erect three-story business building.

Tenn., Bristol.—L. W. Hall is having plans prepared by George W. Burnett, Pyle Bldg., Bristol, Va.-Tenn., for store building; two stories; brick; steel girder; metal roof; plate-glass front; cost \$3000.

Tenn., Chattanooga.—Scott Price is having plans prepared by E. L. Hudnal, Chattanooga, for mercantile building; three stories and basement; brick; cost \$15,000; plans ready for bids. (Mr. Price recently reported as preparing plans.)

Tenn., Chattanooga.—Mills & Lupton are reported as planning erection of mercantile

building; brick construction; four stories and basement.

Tenn., Crossville.—N. J. Ferguson will erect business building; two stories; brick; 40x100 feet.

Tenn., Knoxville.—A. Ziegler has plans by R. F. Graf & Son, Knoxville, for two-story brick building; cost \$15,000.

Tenn., Knoxville.—W. C. Baker will erect store building; brick; plans by W. H. Gildard, Knoxville.

Tenn., Knoxville.—H. A. Depue and Charlton Karpes will erect business building; two stories; cost \$6000; lower floor for store; upper floor for offices.

Tenn., Knoxville.—J. M. McClung & Co. have plans by Baumann Bros., Knoxville, for addition to store building; five stories; 100x125 feet; mill construction; sprinkler system; steam heat; two electric elevators. Address C. J. McClung, Box 37. (Recently noted.)

Tenn., Moscow.—O. H. Cribbins will erect business building; two stories; brick; lower floor for stores; upper floors for offices.

Tex., El Campo.—Welder, Buhler & Holland, Victoria, Tex., will erect building; first floor for stores; upper floors for annex to Rice Hotel; two stories; brick.

Tex., Fort Worth.—Hunt-Hawes Grocery Co. is receiving bids to erect store building; five stories; 100x100 feet; ordinary and mill construction; sprinkler system; cement sidewalks; two electric elevators; cost \$30,000; plans by Sanguinet & Staats, Houston, Tex. (Recently noted.)

Tex., Houston.—Jesse H. Jones has plans by Mauran & Russell, Houston, for store and apartment building; three stories; frame; first floor for store; upper floors for apartments.

Tex., Jefferson.—Hussey & Whelan will erect 75x100-foot store and bank building. (See "Bank and Office Buildings.")

Tex., Pecos.—Pecos Land Co., E. W. Johnson, president, is reported to erect \$20,000 business block. (Recently noted.)

Tex., Waco.—Louis Wielbusch will erect two-story pressed-brick business building.

Tex., Wharton.—A. A. Norton will erect two-story brick building.

Tex., Wharton.—A. A. Norton will erect store building; two stories.

Va., Graham.—C. W. Garland will erect business building.

Va., Norfolk.—Gregory & Williamson will erect five brick store and tenement buildings; cost \$15,000.

Va., Norfolk.—S. M. Morewitz has plans by C. B. Powers, Norfolk, for store building; two stories; 60x24 feet; brick; bids opened. (Recently noted.)

Va., Norfolk.—A. B. Seldner and Moses Marx purchased site with frontage of 205 feet, and will erect stores.

Va., Richmond.—E. Rau and C. A. Laenberg will erect three stores; two stories; brick.

Va., Richmond.—Frank Ferrandini is having plans prepared by Albert Hunt, Richmond, for store building; four stories; brick; cost \$40,000.

Va., Roanoke.—Bartlett Bolling will erect two-story store building; cost \$10,000.

W. Va., Fayetteville.—Fayette Bottling & Ice Co. will erect store and apartment building; two stories; five stores on first floor; apartments above; cost about \$40,000.

W. Va., Grafton.—R. L. Clark & Co. will erect store and apartment-house; two stories; brick or brick veneer; lower floor for store; upper floor for apartment.

W. Va., Montgomery.—Weaver Drug Co. will erect business building; three stories; cost \$10,000; two stores on ground floor; four apartments above; ordinary construction; brick; cost of heating plant \$500; cost of lighting \$25; plans by David Dick, Charleston, W. Va.; Boyd & Cresin, Charleston, probable contractor. (See "Machinery Wanted.")

W. Va., Wilco.—G. Hyman & Son, Keystone, W. Va., has plans by E. L. Shuffelberger, Bluefield, W. Va., for department store; two stories and basement; 20x85 feet; fireproof construction; steam heat (contract placed); electric lighting; cost \$10,000; date of opening bids not set. Address architect.

THEATERS

Ala., Birmingham.—Jake Wells, Richmond, Va., is reported to erect theater to replace Bijou Theater; also reported as considering erection of vaudeville theater.

D. C., Washington.—Riggs Realty Co. will open bids May 22 to erect theater and office building previously noted; eight stories

and basement; 115x176 feet; cost \$800,000. (See "Banks and Offices.")

Md., Baltimore.—Charles N. Boulden, 19 E. Saratoga St., is having plans prepared by A. Lowther Forrest, 11 E. Lexington St., Baltimore, for theater at 409-15 N. Howard St., which he contemplates erecting.

Md., Baltimore.—Louis Kolb, 2311 Jefferson St., and others have plans by John Freund, Jr., 210 E. Lexington St., Baltimore, for moving-picture theater on E. Fayette St.; one story; brick; 112x32 feet; galvanized-iron front; steam heat; plumbing; electric lights.

Mo., St. Louis.—Aubert Amusement Co. will expend \$8000 to erect one-story brick and steel theater.

Tenn., Memphis.—M. Frank, St. Louis, Mo., will erect two air dome theaters on Madison Ave. and Rayburn Blvd.; 65x130 feet; surrounded by seven-foot fence; 12-foot entrance.

Va., Norfolk.—M. S. Spratley is reported to erect theater at Courtney St. and Monticello Ave., to be leased by the Wells Company.

WAREHOUSES

Fla., Tampa.—I. W. Phillips & Co. will erect warehouse; two stories; construction to support additional stories; 120x120 feet; reinforced concrete and structural steel; cost \$25,000.

Fla., St. Petersburg.—C. W. Springstead will erect warehouse and orange packing plant; 80x100 feet; three stories; reinforced concrete; fireproof; concrete floors; lower

floor for packery; second floor for storage; two freight elevators; 12-foot ceilings.

Miss., Carson.—J. W. Worthy will be manager of Farmers' Warehouse Co. to be organized.

N. C. Hendersonville.—Rigby-Morrow Company will erect warehouse; cost \$3000.

N. C., Rockingham.—Baldwin & Ingram contemplate erection of brick warehouse; cost \$6000 to \$8000.

Okl., Oklahoma City.—Manhattan Construction Co. will erect warehouse; six stories; brick; cost \$85,000.

Tenn., Jackson.—Central Lumber Co., J. N. File, manager, will erect office and warehouse building. (See "Bank and Office Buildings.")

Tex., Dallas.—Trinity Cotton Oil Co. will erect warehouse; reinforced concrete and steel; cost \$25,000.

Tex., Fort Worth.—City will erect warehouse; voted \$15,000 bond issue. Address The Mayor.

Tex., Houston.—Hockemeyer, Fisher & Co. of Dallas, Tex., will erect warehouse.

Tex., San Antonio.—Theo. Maggott will erect warehouse; 150x60 feet; frame; cost \$10,000.

Tex., Texas City.—Texas City Transportation Co., W. G. Brimson, president, will erect steel and concrete warehouses, freight sheds, machine shops, install electric carriers in warehouse C, electrify piers, etc.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ark., Little Rock.—Charles T. Ables will expend \$60,000 to erect apartment-house; two buildings; 40x108 feet; fireproof construction; steam heat; electric lighting; day labor; all contracts awarded. (Recently noted.)

ASSOCIATION AND FRATERNAL

Tenn., Chattanooga.—Colored Ancient Free and Accepted Masons awarded contract to Woods & Jenkins to erect Colored Masonic Temple; three stories and basement; brick; cost \$7000; plans by Huntington & Sears, James Bldg., Chattanooga. (Recently noted.)

Tenn., Knoxville.—Fraternal Order of Eagles awarded contract to Calhorne & Brooks, Knoxville, to erect lodge building; three stories and basement; pressed brick; 45x55 feet; lobby 20x43 feet; basement to contain gymnasium, baths, boiler-rooms, etc.; 19-foot macadamized drive in front; 12-foot driveway in rear; cost \$25,000; will receive bids until May 15 for heating, plumbing, painting and wiring; plans by Albert E. Gredig, Knoxville. (Previously noted.)

Tex., Port Arthur.—Benevolent Protective Order of Elks awarded contract at \$2,240 to Warren McDaniel, Port Arthur, to erect theater and lodge building. (Previously noted.)

BANK AND OFFICE

Fla., Jacksonville.—Barnett National Bank building will be of fireproof steel construction; exterior stone work; cost \$25,000; contract for heating, plumbing, electric work and bank fixtures will be let May 10; cost of building complete, \$130,000; plans by Biggers & Muller, 601 Empire Bldg., Atlanta, Ga.; general contract (recently noted) awarded to Burwell & Hillyer of Jacksonville on percentage basis for demolishing old structure and erecting superstructure of new building

Fla., Ocala.—Ocala National Bank awarded contract to erect bank building; Indiana limestone; marble and mahogany interior finish; one story; 40x76 feet; steam heat; electric lights. (Previously noted to have plans by W. B. Camp, Jacksonville, Fla.)

Ky., Bowling Green.—Galloway & Hughes awarded contract to Aaron Phillips, Bowling Green, for brick work in store and office building. (See "Stores.")

Miss., Greenville.—J. Weinberg awarded contract to W. H. Neal, Memphis, Tenn., to erect office and store building; ground floor to be occupied by Neims & Blum Company; 77x10 feet; brick; steam heat; elevator; cost \$40,000; plans by William Dragoo, 1002 Perrin Bldg., New Orleans, La. (Recently noted to receive bids until April 12.)

W. Va., Wilco.—G. Hyman & Son, Keystone, W. Va., has plans by E. L. Shuffelberger, Bluefield, W. Va., for department store; two stories and basement; 20x85 feet; fireproof construction; steam heat (contract placed); electric lighting; cost \$10,000; date of opening bids not set. Address architect.

CHURCHES

Ala., Birmingham.—Jake Wells, Richmond, Va., is reported to erect theater to replace Bijou Theater; also reported as considering erection of vaudeville theater.

D. C., Washington.—Riggs Realty Co. will open bids May 22 to erect theater and office building previously noted; eight stories

and basement; 115x176 feet; cost \$800,000. (See "Banks and Offices.")

Md., Baltimore.—Charles N. Boulden, 19 E. Saratoga St., is having plans prepared by A. Lowther Forrest, 11 E. Lexington St., Baltimore, for theater at 409-15 N. Howard St., which he contemplates erecting.

Md., Baltimore.—Louis Kolb, 2311 Jefferson St., and others have plans by John Freund, Jr., 210 E. Lexington St., Baltimore, for moving-picture theater on E. Fayette St.; one story; brick; 112x32 feet; galvanized-iron front; steam heat; plumbing; electric lights.

Mo., St. Louis.—Aubert Amusement Co. will expend \$8000 to erect one-story brick and steel theater.

Tenn., Memphis.—M. Frank, St. Louis, Mo., will erect two air dome theaters on Madison Ave. and Rayburn Blvd.; 65x130 feet; surrounded by seven-foot fence; 12-foot entrance.

Va., Norfolk.—M. S. Spratley is reported to erect theater at Courtney St. and Monticello Ave., to be leased by the Wells Company.

W. Va., Charleston.—Paul Beatty awarded contract to Metcung Realty Co., 25 Tryon St., Charlotte, to erect dwelling; 18 feet 6 inches by 28 feet 6 inches; mill construction; cost \$3000; plans by R. M. Usher, Charlotte. (Metcung Realty Co. recently noted as awarding contract.)

Md., Baltimore.—Emil Funk, proprietor of Govanstown Hotel, awarded contract to John F. Neidhart, Hamilton, Md., to erect four cottages; cost about \$15,000.

N. C., Charlotte.—R. Fred Zickler awarded contract to McClung Realty Co., 25 S. Tryon St., Charlotte, to erect dwelling; 52x39 feet; mill construction; cost \$2500; plans by R. M. Usher, Charlotte.

N. C., Salisbury.—C. S. Reams will expend \$3000 to erect dwelling; 10 rooms; ordinary construction; heating undecided; contract recently noted awarded to H. F. Starr of Salisbury.

S. C., Rock Hill.—R. S. Hannah awarded contract through architect J. S. Starr, Rock Hill, to W. M. Mitchell to erect proposed dwelling; cost \$4000.

S. C., Rock Hill.—Albert Whitesides awarded contract through architect J. S. Starr, Rock Hill, to A. D. Holler to erect proposed dwelling; cost \$5000. (See "Machinery Wanted.")

Tenn., Chattanooga.—J. Milton Brown awarded contract to John E. Davis to erect two proposed dwellings on McCallie and E. End Aves.; two stories; brick; hot-air heat; gas and electric lighting; construction begun.

Tenn., Chattanooga.—J. W. Massey, 929 E. 11th St., awarded contract to J. M. Potts, 8 Bailey Ave., Chattanooga, to erect dwelling; two stories; eight rooms; brick; metal roof; gas and electric lighting; cost \$3000.

Tenn., Knoxville.—Mrs. Charles Mitchell awarded contract to Thomas & Turner, Knoxville, to erect frame residence; cost \$7000 to \$10,000.

Tenn., Lebanon.—H. M. Freeman awarded contract to A. Finch of Lebanon to erect proposed dwelling; two stories and basement; hot-air heat; electric lighting; cost \$7000; plans by C. K. Colley, Nashville, Tenn.

Tenn., Clarksville.—Christian Church awarded contract to W. F. Coulter Mill & Lumber Co. of Clarksville to erect parsonage; Western bungalow style.

Tex., Houston.—A. S. Cleveland awarded contract to erect nine-room residence; cost \$15,000.

Tex., Stamford.—W. M. Harlan awarded contract to erect residence; cost not less than \$5000.

Tex., Stamford.—Bruce Stevenson awarded contract to erect residence; cost not less than \$5000.

Tex., Stamford.—W. M. Harlan awarded contract to erect residence.

Va., Lynchburg.—J. T. Hancock awarded contract to W. K. Barger, Lynchburg, to erect bungalow; cost \$2500.

Va., Lynchburg.—R. C. Williams awarded contract to W. K. Barger, Lynchburg, to erect bungalow; cost \$2500.

Va., Norfolk.—Daisy Bell Graham will erect frame dwelling; 28x56½ feet; cost \$5000; contract awarded to B. L. Nichols.

Va., Norfolk.—C. W. Doughtie awarded contract to W. E. Parsons, Norfolk, to erect two-story residence.

Va., Norfolk.—Virginia Realty Corporation awarded contract to S. B. Barclay, Norfolk, to erect two two-story residences; cost \$6000.

Va., Salem.—J. G. Fitzgerald awarded contract to G. L. Sears of Salem to erect dwelling; 39x39 feet; eight rooms; brick cased; hot-water heat; electric lighting; cost \$3000; plans by G. R. Ragan, Salem.

W. Va., Triadelphia.—Charles Creighton awarded contract to Thomas Barnes, Wheeling, W. Va., to erect eight-room residence.

erect residence on Harford Rd.; two and a half stories; frame; 25x32 feet; gas and electric lights; slate roof; cost \$2500; will erect two more dwellings later.

Md., Baltimore.—J. Burgess MacNeal, Warner and Wooster Sts., awarded contract to Murray & Haynes, 1700 N. Ellamont St., Baltimore, to erect dwelling on Carlisle Ave. near Garrison Ave.; two and a half stories; 28x34 feet; frame; slate roof; hot-water heat; cost \$4000; plans by Charles Handler, 1024 W. Lanvale St., Baltimore.

N. C., Charlotte.—Paul Beatty awarded contract to Metcung Realty Co., 25 Tryon St., Charlotte, to erect dwelling; 18 feet 6 inches by 28 feet 6 inches; mill construction; cost \$3000; plans by R. M. Usher, Charlotte. (Metcung Realty Co. recently noted as awarding contract.)

Md., Govans.—Emil Funk, proprietor of Govanstown Hotel, awarded contract to John F. Neidhart, Hamilton, Md., to erect four cottages; cost about \$15,000.

N. C., Charlotte.—R. Fred Zickler awarded contract to McClung Realty Co., 25 S. Tryon St., Charlotte, to erect dwelling; 52x39 feet; mill construction; cost \$2500; plans by R. M. Usher, Charlotte.

N. C., Salisbury.—C. S. Reams will expend \$3000 to erect dwelling; 10 rooms; ordinary construction; heating undecided; contract recently noted awarded to H. F. Starr of Salisbury.

S. C., Rock Hill.—R. S. Hannah awarded contract through architect J. S. Starr, Rock Hill, to W. M. Mitchell to erect proposed dwelling; cost \$4000.

S. C., Rock Hill.—Albert Whitesides awarded contract through architect J. S. Starr, Rock Hill, to A. D. Holler to erect proposed dwelling; cost \$5000. (See "Machinery Wanted.")

Tenn., Chattanooga.—J. Milton Brown awarded contract to John E. Davis to erect two proposed dwellings on McCallie and E. End Aves.; two stories; brick; hot-air heat; gas and electric lighting; construction begun.

Tenn., Chattanooga.—J. W. Massey, 929 E. 11th St., awarded contract to J. M. Potts, 8 Bailey Ave., Chattanooga, to erect dwelling; two stories; eight rooms; brick; metal roof; gas and electric lighting; cost \$3000.

Tenn., Knoxville.—Mrs. Charles Mitchell awarded contract to Thomas & Turner, Knoxville, to erect frame residence; cost \$7000 to \$10,000.

Tenn., Lebanon.—H. M. Freeman awarded contract to A. Finch of Lebanon to erect proposed dwelling; two stories and basement; hot-air heat; electric lighting; cost \$7000; plans by C. K. Colley, Nashville, Tenn.

Tenn., Clarksville.—Christian Church awarded contract to W. F. Coulter Mill & Lumber Co. of Clarksville to erect parsonage; Western bungalow style.

Tex., Houston.—A. S. Cleveland awarded contract to erect nine-room residence; cost \$15,000.

Tex., Stamford.—Bruce Stevenson awarded contract to erect residence; cost not less than \$5000.

Tex., Stamford.—W. M. Harlan awarded contract to erect residence.

Va., Lynchburg.—R. C. Williams awarded contract to W. K. Barger, Lynchburg, to erect bungalow; cost \$2500.

Va., Norfolk.—Daisy Bell Graham will erect frame dwelling; 28x56½ feet; cost \$5000; contract awarded to B. L. Nichols.

Va., Norfolk.—C. W. Doughtie awarded contract to W. E. Parsons, Norfolk, to erect two-story residence.

Va., Norfolk.—Virginia Realty Corporation awarded contract to S. B. Barclay, Norfolk, to erect two two-story residences; cost \$6000.

Va., Salem.—J. G. Fitzgerald awarded contract to G. L. Sears of Salem to erect dwelling; 39x39 feet; eight rooms; brick cased; hot-water heat; electric lighting; cost \$3000; plans by G. R. Ragan, Salem.

W. Va., Triadelphia.—Charles Creighton awarded contract to Thomas Barnes, Wheeling, W. Va., to erect eight-room residence.

GOVERNMENT AND STATE

Md., State Sanatorium.—Board of Managers of Maryland Tuberculosis Sanitarium awarded contract to John Cowan, 106 W. Madison St., Baltimore, Md., to erect additional build-

ing to accommodate about 200 patients; plans by Howard Sill, 11 E. Pleasant St., Baltimore, Md.; call for central administration building with two wings; two stories; frame; slate roof; frontage 500 feet; cost \$100,000; also awarded contracts for heating, plumbing and electric wiring to Wallace Stebbins & Sons, Charles and Lombard Sts., Baltimore, Md.; H. C. Bower and R. E. Wood & Co., 339 N. Calvert St., Baltimore, Md., respectively. (Recently noted to open bids April 25, and Mr. Cowan noted as among contractors estimating.)

HOTELS

Fla., Eustis.—Ocklawaha Hotel Co. awarded contract for addition to hotel.

Okla., Hugo.—Hugo Building & Development Co. awarded contract to W. M. Robinson to erect hotel; 50x140 feet; mill construction; heating and lighting contract not let; cost \$55,000; plans by W. H. Blakely, Fort Smith, Ark. (Recently noted.)

MISCELLANEOUS

Ala., Hartard.—J. W. Stewart awarded contract to Amos & Co., Samson, Ala., to erect livery and sales stable; brick; 60x100 feet.

D. C., Washington.—Dickson Home for Aged Men awarded contract to Boyle-Robertson Construction Co., Union Trust Bldg., Washington, to erect three-story brick and reinforced concrete building at 14th and Galatin Sts. N. W.; 252x70 feet, with wing 100x50 feet; fireproof construction; steam heat; electric lighting; cost \$120,000; plans by A. B. Heaton, 1319 F St. N. W.

La., New Orleans—Fair Buildings.—Mississippi-Alabama Fair Association awarded contracts to M. Bozeman, Pool Bros. & Co. and Ball & Gold of Meridian, Miss., to erect merchants and woman's building, 70x150 feet; grandstand, 50x150 feet; bleachers, 30x100 feet; two latter with capacity of 2500 and 1000, respectively; poultry building, 41x105 feet; cattle building, 45x180 feet; swine building, 35x160 feet; barns with 100 box stalls 10x10 feet; judges' stand and other small buildings; plans by Burt Stuart, Meridian. (Recently noted.)

Tex., Brownsville.—Brownsville Country Club awarded contract to C. F. L. Bock, Brownsville, to erect proposed clubhouse; cost \$7000; construction under supervision of Martin Hanson, Brownsville.

Tex., Breckenridge—Pavilion.—Breckenridge Townsite Co. awarded contract to A. J. Curry to erect pleasure pavilion; 35x90 feet. (See "Miscellaneous Construction.")

Tex., Cuero—Sanitarium.—J. W. Burns and others awarded contract to F. R. Perkins & Son, Cuero, to erect sanitarium; brick; 40x83 feet; covered with asbestos shingles; cement plaster; steam heat; electric lights; operating room, sterilizing room, six baths, two negro wards and room to accommodate 16 patients; cost \$16,000.

Tex., Fort Worth—Restaurant.—T. J. Smith, 614 S. Calhoun St., awarded contract to Brown & Eckles, Fort Worth, to erect restaurant; one story; 25x80 feet; brick with concrete floor; heating and lighting not determined; concrete sidewalks; cost \$2500; plans by J. W. Anderson, Fort Worth. (Recently noted under "Stores.")

RAILWAY STATIONS

Va., Covington.—Chesapeake & Ohio Railway awarded contract to A. M. Walkup to erect passenger station; general waiting-room 30x30 feet; 22-foot ceiling; ladies' waiting-room 18x19 feet; 14-foot ceiling; smoking room 15x14x15 $\frac{1}{2}$ feet; colored waiting-room 11x19 $\frac{1}{2}$ feet; office room 14x19 feet; pressed brick; stone trimmings; tile roof; porches; 600 feet of shed with cement floor along tracks; low-pressure steam heat. (Recently noted.)

SCHOOLS

D. C., Washington.—Catholic University of America awarded contract to Boyle-Robertson Construction Co., Union Trust Bldg., Washington, to erect dormitory; at present will erect only one wing 267 feet long; fireproof construction; central heating and lighting plant; cost \$250,000; plans by T. H. Poole & Co., New York. (Boyle-Robertson Construction Co. previously noted as having contract for power-house and engineering school.)

Okla., El Reno.—Board of Education awarded contract to L. F. Lee, Oklahoma City, Okla., to erect school building; two stories and basement; 134 feet 6 inches by 39 feet 9 inches; fireproof corridors and stairs; brick walls; steam-blast heat; cost \$58,200; plans by Layton & Smith, Oklahoma City, Okla. (Recently noted.)

Tex., Amarillo.—Lowrey-Phillips School awarded contract to W. M. Rice to erect school; 94x86 feet; four stories; first story of reinforced concrete with steel; superstructure walls of pressed red brick with light buff brick trimmings; first story will have concrete floor; other floors of hard wood, and all inner walls of wood; ground floor will contain gymnasium, shower baths, kitchen and boiler rooms, etc.; second floor for auditorium, study hall, library, etc.; third floor to have six classrooms; fourth floor for dormitory; freight elevator; each floor supported by columns; cost about \$35,000; also awarded contracts to erect concrete tower, sinking six-inch well, building 200-barrel tank and installation of compressed-air lift.

Va., Suffolk.—City awarded contract to Wise Granite Co., Wise, N. C. (subject to approval of City Council), to erect high school; hot-air heat; electric lights; plans by Charles M. Robinson, Mutual Bldg., Richmond, Va.; building to be 65x130 feet; two stories and basement; semi-fireproof construction; American heating and ventilating system; electric lighting; cost \$36,000; (Recently noted to open bids April 25.)

STORES

Ala., Gadsden.—R. B. Kyle will erect building to replace structure previously burned; awarded contract to Columbus (Ga.) Showcase Co. to erect front of building and for designing interior; facade of white porcelain brick.

Ala., Corey, R. F. D. from Ensley.—Dr. Watkins, Aberdeen, Miss., awarded contract to erect brick store building.

Ala., Pell City.—R. A. Martin has plans by and awarded contract to V. P. Gunter to rebuild drug store; two stories; brick; cost \$5000. (Recently reported burned.)

D. C., Washington.—James B. Nicholson, 1311 G St. N. W., has plans by and awarded contract to W. J. Simmons, 1719 New Jersey Ave. N. W., Washington, for two two-story brick and steel buildings at 1319-21 H St. N. E.; cost \$25,000.

D. C., Washington.—Caroline Appich, 911 E. Capitol St., will expend \$6000 to remodel store building at 312 Pennsylvania Ave.; mill construction; contract awarded to Page Construction Co., 303 Hibbs Bldg., Washington; plans by Swift & Co., Chicago, Ill. (not Washington, D. C., as recently stated.)

Fla., Ocala.—Baxter Carn has plans by and awarded contract to McIver & Mackey, Ocala, to erect two-story-and-basement brick double store; cost \$13,000. (Recently noted.)

Fla., Tampa.—Roberts Bros. awarded contract to Bates & Hudnall, Tampa, to erect one-story brick business building; cost \$3500.

Ga., Atlanta.—Jacob Spielberger, 278 Highland Ave., awarded contract to Higdon & McDaniel to erect business building; 44x56 feet; two stories; brick; gas and electric lighting; cost \$4500 to \$5000. (Recently noted.)

Ga., Atlanta.—George W. Parrott has plans by and awarded contract to Moise DeLeon, Atlanta, to erect store building; three stories and basement; 45x140 feet; mill construction; cement sidewalks; elevator; cost \$25,000; to be occupied by Bodenheimer Bros. (Recently noted.)

Ky., Bowling Green.—Galloway & Hughes awarded contract to Aaron Phillips, Bowling Green, for brick work for proposed building; two stories; 35x123 feet; stores on ground floor; offices above.

Miss., Greenville.—J. Weinberg awarded contract to W. H. Neal, Memphis, Tenn., to erect store and office building. (See "Bank and Office Buildings.")

N. C., Charlotte.—Cashlon & Hawkins have contract to erect four two-story stores on Holton property; two stories; 60x104 feet; ordinary construction; stoves and gas heaters; electric lighting; cost \$8400; plans also by Cashlon & Hawkins.

Okla., Chickasha.—S. H. Kress & Co., 396 Broadway, New York, awarded contract, it is reported, to Granger & Co., Tulsa, Okla., for erection of store; two stories; brick; 50x100 feet.

Tex., Bryan.—R. W. Howell will erect two-story brick business building; 30x148 feet; mill construction; electric lighting; cost \$16,000; plans by W. H. Meyerlanders, Bryan; contract awarded to J. R. Hartgraves, Navasota, Tex.

Tex., Wharton.—L. Peine & Son awarded contract to erect business building; frontage 60 feet.

Tex., Wharton.—L. Peine & Son awarded contract to erect brick business building.

Va., Richmond.—R. Francione awarded contract to W. A. Chesterman, Richmond, to

erect two brick stores; 46 feet by 120 feet 4 inches; mill construction; cost \$18,000; plans by Carl Ruehrmund, Richmond.

Va., Roanoke.—S. D. Ferguson awarded contract to R. A. Figgatt to erect store building; 25x94 feet; fireproof construction; steam heat; concrete sidewalks and vault lights; passenger elevator; cost \$25,000. (Previously noted.)

W. Va., Princeton.—E. B. Spangler & Co. awarded contract to Ball & Caldwell, Princeton, to erect proposed business building; 30x90 feet; three stories; ordinary construction; hot-water heat; electric lighting; cost \$11,000; plans by A. F. Wysong, Princeton.

THEATERS

Tex., Port Arthur.—Benevolent Protective Order of Elks awarded contract at \$32,240 to

Warren McDaniel, Port Arthur, to erect theater and lodge building. (Previously noted.)

WAREHOUSES

Fla., Ocala.—Dr. J. E. Chase awarded contract to McIver & Mackey, Ocala, to erect proposed warehouse; frame; iron clad; two stories; cost \$2200.

La., New Orleans.—National Rice Milling Co. awarded contract to John Reiss, Hibernia Bank Bldg., New Orleans, to erect storage warehouse; 46x215 feet; ordinary brick construction; cost \$43,000; plans by George U. Borden, Hibernia Bank Bldg., New Orleans, (Recently noted.)

Md., Baltimore.—Baltimore & Ohio Railroad, F. L. Stuart, chief engineer, Baltimore, awarded contract to John S. Busick to erect warehouse on McHenry St. near Parkin St.; 50x60 feet; two and a half stories; slag roof; cost \$6000.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Piedmont.—Reported that Rev. Geo. D. Harris and others are surveying for a railroad south of Piedmont, and he is in communication with capitalists with a view to construction.

Ala., Tuscaloosa.—Contract is reported let for part of the construction of the Tuscaloosa Mineral Railroad from Tuscaloosa to Brookwood, A. a., 18 miles, to connect there with the Louisville & Nashville Railroad. F. G. Blair of Tuscaloosa is president. Dunn & Lallande, American Trust and Savings Bank Bldg., Birmingham, Ala., are said to have the contract. Erwin Sloan is chief engineer.

Ala., Union Springs.—The Union Springs & Northern Railway, says a dispatch, has changed its name to Birmingham & Southeastern, and will resume construction to Millstead. W. M. Blount is president at Union Springs, Ala.

Ark., Harrisburg.—A movement is in progress to build an electric railway from Marked Tree to Harrisburg and Newport, Ark., about 50 miles. A committee was appointed as follows: L. D. Freeman, J. G. Gant, Harry Holmes, Dr. A. D. Miller, A. J. Tannenbaum and Morris Hayutin of Harrisburg, Charles Thompson of Weiner, Joe Hall of Waldenburg, M. W. Hazel of Marked Tree, L. A. Ritter of Tyronza, Ark.

Ark., Helena.—An officer of the Missouri & North Arkansas Railroad says that plans for terminal improvements at Helena have not been fully decided, and probably will not be for two or three months. George L. Sands is vice-president at Eureka Springs, Ark.

D. C., Washington.—The Washington & Old Dominion Railway Co. has applied for charter to build a line from the District of Columbia to Winchester, Va., about 60 miles. Capital not less than \$1,000,000 and not more than \$2,000,000. Officers, Charles M. Henckley, president; W. B. Emmet, vice-president; George Howard, treasurer, and Charles E. Howe, secretary, all of Washington, D. C. J. Garnet Pollard is attorney.

Fla., Ocala.—John Upchurch of Jacksonville, Fla., it is reported, contemplates building a railroad from Lake George about 40 miles west to Ocala.

Ga., Adel.—Application has been made to charter the Adel, Pavo & Thomasville Railway Co., previously reported. H. H. Tift of Tifton, Ga., and others are interested. (See Manufacturers Record, April 20.)

Ga., Barnesville.—A dispatch says that application has been made to charter the Barnesville Railroad Co. to build a line from Barnesville to a point south of Piedmont, 6 $\frac{1}{2}$ miles; incorporators, T. W. Cochran, R. A. Stafford, A. Peacock, W. H. Mitchell, William Wakefield, J. W. Garland, H. H. Gray, L. A. Collier, W. C. Jordan and V. O. Marshburn.

Ga., Cary.—The Cary North & South Railroad Co. has organized with H. R. Brown of Macon, Ga., president; H. F. Armstrong, vice-president; Frank Wade, treasurer; J. H. King, secretary, the other directors being B. F. Abney, W. L. Jameson, W. D. Porter, S. L. Richardson, G. H. Wade, Sr., D. B. Dunn of Macon and T. W. Pritchett. Charter is granted for line from Jeffersonville or Danville to Cary, possibly to Cochran, and later to Hawkinsville; headquarters at Cary, Ga.

Ga., Gainesville.—The Byrd-Mathews Investment Co., it is reported, will build a railroad 40 miles long from Gainesville to open up timber lands. A. R. Byrd, Jr., St. Louis, Mo., is secretary.

Ky., Lexington.—Frederick W. Bacon of New York, who has been elected vice-president

and manager of the Kentucky Traction & Terminal Co., which represents a consolidation of the Lexington Railway Co., the Central Kentucky Traction Co., the Bluegrass Traction Co. and the Lexington Utilities Co., is quoted as saying that track reconstruction and other improvements will be made. John Blair MacAfee of Philadelphia and others are interested.

Ky., Mayfield.—An official of the Illinois Central Railroad denies the press report that a cut-off might be built from Mayfield to Gilbertsville, Ky.

Ky., Paducah.—James Campbell, Jr., and Charles C. Baldwin of Centralia, Ill., are reported interested in a plan to build an electric railway from Paducah to Lone Oak, Ky., and are seeking a franchise.

Ky., Woodlawn.—The Alabama Construction Co., D. B. Lacy, president, Anniston, Ala., is reported to have secured contract for considerable work on the Louisville & Nashville Railroad at Woodlawn. W. H. Courtney is chief engineer for the railroad at Louisville, Ky.

La., Ringgold.—An officer of the Louisiana & Arkansas Railway writes that no surveys have been made for any extension from Jamestown to Ringgold, La. This refers to a recent report that such a line would be built.

La., New Orleans.—An official says that the work proposed by the Illinois Central Railroad includes second track on 13 miles from Frenier to Orleans Junction, La., connecting with existing double track at each end, completing two tracks into New Orleans. Also proposed to reduce grades on 43.6 miles of line south of McComb, Miss., giving a maximum of .3 of 1 per cent. between that point and New Orleans. Contract for latter not let; other work handled by company's forces. A. S. Baldwin, Chicago, is chief engineer.

La., New Orleans.—The United Public Utilities Co., capital \$1,257,000, is reported organized to build and operate in Louisiana and other States street railways, gas, electric light and power plants. Directors, Lynn D. Dinkins, Silas A. Hyman, Max Schwabacher, S. E. Sneath, A. C. Wuerpel, Sol Wexler, P. H. Saunders and Charles Payne Fennier of New Orleans.

La., Yellow Pine.—An officer of the Sibley, Lake Bistineau & Southern Railway says that no new work is contemplated. This denies a recently-circulated report.

Md., Baltimore.—The Western Maryland Railroad contemplates laying additional terminal tracks at Port Covington, in the southern part of Baltimore. H. R. Pratt is chief engineer.

Md., Hagerstown.—The Hagerstown & Clear Spring Railway Co. has been authorized to issue \$250,000 of first mortgage 5 per cent. bonds and also stock to yield \$2,000. L. N. Downs of Hagerstown and others are interested.

Md., Towson.—Construction is reported begun upon the Towson & Cockeysville Electric Railway, about eight miles long, and to be completed by September 1. J. Alexis Shriver of Belair, Md., is president, and James S. Nussear of Lutherville, Md., secretary and treasurer. The J. H. Harlow Contracting Co. has the contract.

Miss., Bay St. Louis.—Lacy & Sons, contractors, of Anniston, Ala., are reported to have a contract to rebuild the Louisville & Nashville Railroad from Bay St. Louis to New Orleans.

Miss., Laurel.—Reported that survey is being made for a standard-gauge railroad from a point near Laurel east to Waynesboro, about 20 miles. The Mayor of Laurel may be able to give information.

Miss., West Point.—One of the parties interested in the Secona Valley & Southeastern Railroad says that it is to succeed the old West Point & Houston enterprise, but charter is amended to change terminals and secure subscriptions along the route. A large timber section on Secona River will be reached. It is proposed to reorganize and elect officers. Meanwhile L. T. Carlisle, promoter of the plan and treasurer of the old company, will give information.

Mo., Bismarck.—The Bismarck, Belieview Valley & Sunlight Railway Co. is reported projected to build an electric railway from Bismarck to Sunlight, 20 miles. The Mayor at Bismarck may be able to give information.

Mo., St. Louis.—The Chicago & Northwestern Railway is reported surveying and negotiating to secure entrance to St. Louis. E. C. Carter is chief engineer at Chicago, Ill.

Mo., St. Louis.—East St. Louis & St. Louis Traction Co. chartered in Illinois; capital \$2500; incorporators, L. C. Haynes, C. F. Hewitt, I. B. Sager, T. W. Gregory and M. W. Schaefer.

N. C., Charlotte.—The Southern Railway, it is reported, is negotiating for rights of way to build second track between Charlotte and Atlanta. W. H. Wells is chief engineer of construction at Washington, D. C. An officer says that surveys were made for this work some time ago.

N. C., Rosman.—The Gloucester Lumber Co. of Rosman is building a standard-gauge railroad to timber recently purchased. Jos. S. Silverstein is president; A. D. Updegraff, vice-president, at Williamsport, Pa., and N. S. Brittain of Stroudsburg, Pa., secretary and treasurer.

N. C., Rutherfordton.—The North Carolina Interurban Railway Co., it is announced, has organized under its new charter, having been formerly known as the Isothermal Traction Co.; capital \$100,000, which may be increased to \$10,000,000.

Surveys reported completed for an electric railway from Rutherfordton to Gastonia, N. C., altogether about 100 miles. Other points which may be reached are Charlotte, Dallas, Cherryville, Shelby, Polling Springs, Chimney Rock, Hickory Nut Gap and Fairview, N. C.; incorporators, John C. Mills of Raleigh, L. L. Jenkins, W. A. Harrill, J. T. Gardner, M. L. Mauney, P. B. Babington, E. L. Wilson, J. Y. Hamrick, K. S. Finch and George L. McKay of Rutherfordton, N. C.

N. C., Salisbury.—The W. J. Oliver Company, recently chartered, has organized to build the proposed electric interurban railway to Concord, 22 miles. It will also operate the Salisbury & Spencer Railway and the Concord Street Railway; capital \$400,000. W. J. Oliver of Knoxville, Tenn., is president; John M. Beall of St. Louis, Mo., secretary, and T. J. Jerome of Salisbury, N. C., treasurer.

N. C., Spruce Pine.—R. L. Dyer of Johnson City, it is reported, will survey for a railroad from Spruce Pine to Edgemont, N. C., about 35 miles, thus connecting the Clinchfield road and the Carolina & North Western.

Okl., Oklahoma City.—The Missouri, Kansas & Texas Railway, says a report, contemplates double-tracking its line in Oklahoma. S. B. Fisher is chief engineer at St. Louis, Mo. An officer says, referring to this, that it will doubtless be done when traffic warrants, but nothing is being undertaken at present.

Okl., Valliant.—The Texas, Oklahoma & Eastern Railroad Co. is reported to have completed 19 miles and to be working on four miles more of its proposed line from Valliant eastward to McCurtain county via Bismarck to a point near the eastern boundary of Oklahoma to develop lumber lands; capital \$200,000. Herman Dierks is president and general manager, and H. L. Dierks, secretary, both of Kansas City, Mo.

S. C., Abbeville.—W. H. H. Newell, Anderson, S. C., says that preliminary survey has been made and report submitted for the proposed railway from Abbeville to Antreville, S. C., 15.55 miles. Company not organized.

S. C., Bamberg.—Survey is reported complete for the proposed Bamberg & Ehrhardt Railroad and contract let to J. A. Williams, E. C. Hoyt and W. C. Wolfe, who are expected to begin work soon. J. A. Wyman is president; Thomas Black and W. M. Brabham, vice-presidents, and W. D. Rhood, secretary and treasurer.

S. C., Chester.—It is proposed to build a trolley line from Chester to Great Falls. The secretary of the Commercial Club may be able to give information.

S. C., Camden.—Reported that R. E. Sharpe of Rembert, S. C., and others are interested

in a plan to build an electric railway from Camden to Sumter, S. C., about 30 miles.

S. C., Saluda.—A dispatch says that \$10,000 of bonds have been voted in aid of the railroad building from Ward to Saluda—the Augusta Northern. T. C. McNeely, Ward, S. C., is superintendent of construction.

Tenn., Knoxville.—H. C. McCrary & Co. of Knoxville are reported to have been awarded a contract by the Southern Railway to build additional sidings at Roe Junction east of Morristown, Tenn., and also at eight stations between Knoxville and Chattanooga, including Ebenezer, Sanford, Sweetwater, Philadelphia, Petros, Loudon and Lenoir City.

Tenn., Memphis.—Concerning the reported purchase of ground for terminals, about nine miles east of Memphis and west of Berclair, an officer of the Nashville, Chattanooga & St. Louis Railway says that the purchase was with reference to the future, and not for immediate improvement.

Tenn., Nashville.—Official information is to the effect that the capital of the proposed Nashville-Gallatin Interurban Railway is \$750,000 instead of \$75,000, as stated in a press report. H. H. Mayberry is president of the Fidelity Securities Corporation, Stahlman Bldg., Nashville, Tenn., which will build the road.

Tex., Aransas Pass.—An officer of the Rockport & Port Aransas Railroad Co. says that the proposed road will be 11½ miles from Rockport to Harbor Island via Light house and Quarantine Station, including about four bridges from 50 to 400 feet long. Route level. Negotiating with parties to build. C. G. Johnson is president, John H. Taylor vice-president and general manager, R. R. Scrivner treasurer, Harry Taylor secretary and Fred Percival chief engineer.

Tex., Galveston.—L. C. Bradley, general manager of the Galveston Electric Co., is reported as saying that heavier rails will be laid on 21st St. and new tracks will be laid from the foot of Broadway to the Causeway, 110-pound rails being used. This is for the Houston interurban cars.

Tex., Jefferson.—The Jefferson & Northwestern Railway, says a dispatch from Linden, will build an extension of five miles to that place. C. E. Bancker is general superintendent at Jefferson, Tex. A. D. Clark is president at Dallas, Tex.

Tex., Longview.—Ed Kennedy, 916 Texas Ave., Houston, Tex., and others are reported promoting plan for the Houston, Longview & Northern Railroad.

Tex., Quanah.—An officer of the Quanah, Acme & Pacific Railway says that surveys are to be started immediately from Paducah, Tex., west, but nothing further is decided. This is with reference to the report that \$40,000 of bonds are to be issued and more construction done. Sam Lazarus is president and C. E. Enslinger general manager and chief engineer.

Tex., Pecos.—Information received concerning the railroad proposed by C. H. Beatty of Ogden, Utah, and others, is to the effect that it will be called Rock Island, Pecos & Gulf and will extend from Melrose, N. M., to Pecos, Tex., via Portales and Knowles, N. M., and Andrews and Loving, Tex., 180 miles. Country is level. M. J. Healy of Amarillo, Tex., is president; C. H. Beatty, general manager.

Tex., Wichita Falls.—The Wichita Falls & Northwestern Railway. It is reported, contemplates building soon a line north from Wichita Falls, Tex., to Lawton, Okla., about 50 miles. J. A. Kemp is president and R. A. Thompson chief engineer, both of Wichita Falls, Tex.

Va., Dendron.—The Surry, Sussex & Southampton Railroad is reported building an extension from Surry Courthouse to Smithfield, and nine miles have been graded. E. Rogers is general superintendent at Dendron, Va.

Va., Grundy.—The Levisa River Railroad Co., recently chartered in Kentucky, has also been granted a charter in Virginia to build from the Kentucky boundary to Grundy, 14 miles. Entire line will be about 35 miles long, from Ward Station, in Pike county, Kentucky, to Grundy, Va. Decatur Axtell and other officials of the Chesapeake & Ohio Railway at Richmond, Va., and elsewhere, are the incorporators. The officers are Decatur Axstell, president; E. W. Grice, vice-president; A. Trevitt, secretary; M. T. Spicer, assistant secretary; J. S. Mackie, treasurer; C. E. Potts, assistant treasurer; L. S. Sullivan, Comptroller.

Va., Richmond.—An officer says that bids will be received until May 15 for constructing the Tuckahoe & James River Railroad from Carbon Hill to Laurel, Va., nine miles, connecting with the Richmond, Fredericksburg

& Potomac Railroad. Country varies from undulating to level. Directors are Wm. G. Woolfolk, president, Lorraine, Va.; James W. Woolfolk, H. E. Watts, N. C. Brooks and Jno. T. Jones. W. P. Sullivan is general manager and Wade Allen secretary.

Va., Grafton.—The Grafton, Fairmont & Clarksburg Railway Co. has been chartered, with headquarters at Grafton, to build a line about 30 miles long connecting the three places named; capital \$500,000; incorporators, G. F. Humphries and A. B. Corder of Bridgeport, W. Va.; Arthur Staley, Austin C. Merrill and H. P. Keenan of Fairmont, W. Va.; Charles F. Sutherland of Morgantown, W. Va.; C. Lee Reynolds of Flemington, W. Va.; J. M. Roberts, Morris W. Head, John G. Leisure and Charles G. Benton of Pittsburg, Pa., and William Straub of New Kensington, Pa.

Va., Morgantown.—The Morgantown & Dunkard Valley Railway is reported pushing work on its extension to Barker and Cassville. J. Ami Martin is manager.

Va., New Martinsville.—Ellsworth, as well as Magnolia, district is reported to have ratified the bond issue for \$100,000 for the proposed Clarksburg Northern Railroad projected by T. Moore Jackson of Clarksburg

and I. M. Underwood of Middlebourne, W. Va. They are quoted as saying that work will begin immediately. Survey is reported begun, and construction will start May 20.

STREET RAILWAYS

Fla., St. Petersburg.—H. Walter Fuller, manager of the St. Petersburg Investment Co., is reported working on a plan to build a street railway from the west end of Central Ave. to Johns Pass, about seven miles.

Fla., Daytona.—An ordinance has passed two readings in the City Council to grant a franchise for a trackless trolley to Charles P. Sylvester and Miner H. A. Evans.

Ky., Paducah.—The Paducah Traction Co. has purchased from the city a franchise for its lines for 20 years, including the proposed extension to Mechanicsburg. Joseph L. Friedmann is president.

N. C., Greensboro.—The North Carolina Public Service Co. proposes to build an extension of two miles. E. C. Deal is manager.

Tenn., Knoxville.—An ordinance is published granting franchise to the Knoxville Railway & Light Co. for second track on Central Ave. from Broadway to city limits. C. H. Harvey is president.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Acetylene Lights.—Office of the U. S. Engineer, Washington, D. C. Sealed proposals received at this office until 10 A. M. April 29 for furnishing one 3000-candle-power acetylene light, one 500-candle-power acetylene light and one 100-candle-power acetylene light. W. C. Langford, Captain, Engineers.

Air Compressor.—Pennsylvania Equipment Co., West End Trust Bldg., Broad and S. Penn Sq., Philadelphia, Pa., wants air compressor; capacity 1000 to 1400 cubic feet; 80 to 100 pounds steam; motor-driven; can be used for 400-volt alternating current, 25 cycles.

Air Compressor.—Duzets & Son, Hudson Terminal Bldg., 50 Church St., New York, want second-hand compound compressor; 1000 cubic feet air; 100 pounds air pressure.

Bagging.—See "Cotton Ties, etc."

Bank Fixtures.—Citizens' Bank, Calera, Ala., wants set of second-hand bank fixtures, not including safe.

Barrels.—F. B. Howard, 154 Granby St., Norfolk, Va., wants to correspond with manufacturers of barrels for syrup shipping.

Blackboards.—H. M. Wade Manufacturing Co., Charlotte, N. C., wants prices from manufacturers of "Hyloplast blackboards."

Belting.—Westbrooks Manufacturing Co., Jackson, Miss., wants belting for sash and door factory.

Bridge Construction.—Sealed bids will be received by J. E. Dougher at Lewisburg, W. Va., until 2 P. M. May 16, and then accepted or rejected for building bridge across Meadow River, near mouth of Brackens Creek, at Russellville; two propositions: First, bridge of first-class reinforced concrete, capacity 100 pounds per square foot or concentrated live load of 20-ton road roller; second, bridge of steel superstructure with substructure of concrete, 14-foot roadway, capacity 150 pounds per square foot or 20-ton live load, wooden or concrete slab floor; for either proposition plans and specifications furnished by bidders, who are asked to examine site; for further information write J. E. Dougher, Greenbrier County Road Engineer, Lewisburg, W. Va., or Henry A. Gentry, Road Engineer for Fayette county, Fayetteville, W. Va.

Bridge Construction.—Sealed bids will be received by County Court of Greenbrier county until 2 P. M. May 16, and then accepted or rejected, for building bridge across Meadow River; two propositions: First, bridge of first-class reinforced concrete, capacity 150 pounds per square foot or concentrated live load of 20-ton roller, plans and specifications to be furnished by bidders for 45-foot span, 14-foot roadway, nine feet from bed of river to bridge floor; second proposition, bridge of steel superstructure with concrete substructure, 50-foot span, 14-foot roadway, capacity 150 pounds to square foot or 20-ton live load; wooden or concrete slab

floor; plans and specifications by bidders, who are requested to examine location; bidders may secure measurements from John L. Dougher, County Road Engineer, Lewisburg, W. Va.

Bridge Construction.—Wilcox County Commissioners, D. D. Faircloth, chairman, Abbeville, Ga., will receive bids until noon May 15 for construction of steel bridge over Alapaha River four miles from Rochelle, Ga., on Rochelle and Ashburn Rd.; plans on file at Courthouse.

Bridge Construction.—Bids received at Bowling Green, Va., at 12 M. May 8 for erection of bridge over Pole Cat Creek, in Caroline county; concrete structure; six 16-foot clear slab spans; substructure to include pulling down present bridge and piling above high water; certified check for \$250, made payable to P. St. J. Wilson, State Highway Commissioner; plans and specifications can be seen at Mr. Wilson's office or at office of clerk of Circuit Court, Bowling Green; blueprints obtainable from Childrey Sunday Company, Richmond, Va.

Broom Materials.—Hostilio E. Montano, Guayama, P. R., wants to correspond with dealers in broom straw; also manufacturers of plain and decorated handles, twine, wire, tacks, nails, etc., for making brooms.

Building Materials.—F. L. Bonfoc, Charlotte, N. C., wants prices on hardwood floors, mantels and plumbing.

Building Materials.—F. D. Alexander, Charlotte, N. C., wants prices on metal and tin roofing, skylights, steel girders, post and glass front for 52x73-foot store building.

Building Materials, etc.—Henry T. Offterdinger, 504 9th St. N. W., Washington, D. C., wants prices on finishing, metal ceilings and walls, glass store front, glass humidors and tile flooring for four-story addition to tobacco factory.

Bulkhead Construction.—U. S. Engineer Office, Mobile, Ala. Proposals for construction of 1150 feet of creosoted timber bulkhead at Mobile will be received until 11 A. M. May 27; information on application; C. A. F. Flagler, Major, Engineers.

Canal Construction.—Galveston County Drainage District No. 1, R. H. Bushway, chairman, Algoa, Tex., will receive bids until 9.30 A. M. May 30 for construction of lateral opening La Flores Bayou and Willow Bayou, excavating about 100,000 cubic yards earth; information on application; E. Evans, engineer, Galveston, Tex.

Car.—Pennsylvania Equipment Co., West End Trust Bldg., Broad and S. Penn Sq., Philadelphia, Pa., wants small second-hand private car.

Cement.—War Department, U. S. Engineer Office, Montgomery, Ala. Sealed proposals for furnishing about 35,000 barrels American Portland cement received until May

31. Information on application. G. D. Fitch, Lieutenant-Colonel, Engineers.

Bank Fixtures.—Citizens' Bank, Calera, Ala., wants set of second-hand bank fixtures, not including safe.

Cement.—War Department, U. S. Engineer Office, Montgomery, Ala. Sealed proposals for furnishing about 35,000 barrels American Portland cement received until 1 P. M. May 31. Information on application. G. D. Fitch, Lieutenant-Colonel, Engineers.

Cemetery Markers.—W. J. Nelms, Sils by Bldg., Newport News, Va., wants (for cemetery company) concrete or glazed numbered markers for single graves.

Chewing-gum Machinery.—Franklin Caro Company, 2405 E. Franklin St., Richmond, Va., wants gum-wrapping machines, cutting and scoring machines and mixers.

Coal.—U. S. Engineer Office, 910 17th St. N. W., Washington, D. C. Sealed proposals for furnishing and delivering 3000 tons, more or less, of bituminous coal received until 12 M. May 25, and then publicly opened. Information on application. W. C. Langfitt, Lieutenant-Colonel, Engineers.

Concrete.—See "Cemetery Markers."

Concrete Machinery.—See "Drain-pipe Machinery."

Cornice Brake.—W. H. Rogers Company, Houston, Tex., wants new or second-hand 10 or 12-foot cornice brake.

Cotton Bagging.—See "Food Products, etc."

Cotton Machinery.—Sealed bids will be received for supplying textile machinery for prison system, Huntsville, Tex., May 22. For specifications and all information address J. A. Palmer, secretary Prison Commission, Huntsville, Tex.

Cotton Mill.—Waco Business Men's Club, G. K. Hardwick, assistant secretary, Waco, Tex., asks estimates on erection of 5000-spindle cotton mill.

Cotton Ties, etc.—Ben H. Harvin, Hotel Sumter, Sumter, S. C., wants addresses of manufacturers and jobbers of cotton ties and cotton bagging.

Crusher.—E. A. Kline, Greenville, S. C., wants prices on 10-horse-power mounted rock crusher.

Desks.—See "Office Furniture, etc."

Dike Work.—Sealed proposals endorsed "Proposals for Extension of Dikes" will be received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. June 3, and then and there publicly opened, for extension of dikes at navy-yard, Mare Island, Cal. Plans and specifications obtained on application to bureau or to commandant of navy-yard named. R. C. Holiday, chief of bureau.

Ditching Machinery.—See "Road Construction, etc."

Drain-pipe Machinery.—R. W. Hall, Clinton, Miss., wants outfit for making concrete sewerage pipe.

Dredging, etc.—U. S. Engineer Office, Jacksonville, Fla. Sealed proposals for dredging and constructing shore revetment in St. John's River, Fla., will be received at this office until 12 M. May 25, and then publicly opened; information on application. R. Spalding, Captain, Engineers.

Dredging.—Office of Constructing Quartermaster, Fort Caswell, N. C. Sealed proposals, signed in triplicate, for dredging narrow channel with narrow basin to launch wharf at Fort Caswell, N. C., approximately 40,000 cubic yards material in cut, received until 3 P. M. May 15, and then publicly opened. Bidding blanks, plan, specifications and necessary information obtained at this office. Bidders must submit lump sum bid for all work complete. The guaranty part of the proposal must be properly filled out in the amount of 10 per cent. of total bid, or if preferred, certified check for that amount may be enclosed in lieu of other guaranty. Basin to be 100 feet wide and channel 60 feet wide; these dimensions refer to bottom of basin and channel. Slopes must be dredged to such degree of inclination as determined by angle of repose of excavated materials at any point. Materials which are known to exist are sand, silt, mud and shells. R. O. Edwards, First Lieutenant, Coast Artillery Corps, U. S. Army, Constructing Quartermaster.

Dredging.—U. S. Engineer Office, Room 2, Custom-house, Norfolk, Va. Sealed proposals for dredging in harbor at Norfolk, Va., received at this office until 12 noon June 1, and then publicly opened. Information on application. Mason M. Patrick, Lieutenant-Colonel, Engineers.

Dredging.—U. S. Engineer Office, Jacksonville, Fla. Sealed proposals for dredging and constructing shore revetment in St. John's River, Florida, received at this office.

until 12 M. May 25, and then publicly opened. Information on application. George R. Spalding, Captain, Engineers.

Dry Cells.—War Department, Office of Chief Signal Officer, Washington, D. C. Sealed proposals received until 11:30 A. M. May 1 under proposal No. 521 for furnishing 20,000 Columbia dry cells or such parts thereof as may be required from May 1, 1911, to April 30, 1912. For further information address A. S. Cowan, Captain, Signal Corps, U. S. Army, Disbursing Officer.

Dry Pan.—Dixie Chemical & Mining Co., Box 66, Columbus, Ga., wants nine-foot dry pan guaranteed to grind 200 tons material after being dried to 5 per cent. moisture, so that it will pass through screens 10 mesh, No. 20 wire; immediate shipment.

Electric Dynamo.—See "Water Systems, etc."

Electric Motor.—Capital Manufacturing Co., J. M. Hartfield, president, Jackson, Miss., wants new or second-hand 20-horse power three-phase motor.

Electrical Machinery.—W. H. Rogers Company, Houston, Tex., wants 10 to 20 horse-power alternating-current three-phase electric motor; new or second-hand.

Electrical Machinery, etc.—Sealed proposals, endorsed "Proposals for Electric Lighting Machinery and Accessories," will be received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. May 13, and then opened, for 12-kilowatt gasoline engine belted generator set, 200 ampere hour storage battery, accessories, wiring material, etc., at United States Marine Corps Rifle Range, Winthrop, Md.; plans and specifications can be obtained on application to Bureau of Yards and Docks; R. C. Holiday, Chief of Bureau.

Electrical Machinery.—Arlington Electric Co., Falls Church, Va., wants prices on transformers, lamps, cross-arms, pins, insulators, poles, etc., for probably territory of $7\frac{1}{2}$ to 2 miles.

Electrical Switchboard, etc.—War Department, Office of Chief Signal Officer, Washington, D. C. Sealed proposals received until May 1 under proposal No. 523 for furnishing 4 switchboards, local battery, 5 pair of cords capacity, 5 pair equipped, 25 lines capacity, 25 lines equipped, equal to Dean No. 2, figure 69, and one strip of 10 drops and jacks, mounted. For further information address A. S. Cowan, Captain, U. S. Army, Disbursing Officer.

Electric Plant.—Sealed bids for entire work or any section of work covered by specifications for power plant for City of Columbia, Mo., will be received by City Clerk until 7:30 P. M. May 16, and opened in presence of City Council at its first regular meeting thereafter; work includes furnishing three 400-horse-power water-tube boilers, settings, breeching and furnaces; one 500-kilowatt turbo-generator, exciters and switchboard panel; jet centrifugal condenser and cooling tower; 2000-horse-power feed-water heater; boiler-feed pumps; motor-driven turbine service pumps; reinforced concrete chimney; coal and ash-handling machinery and bins; conduits, cabinets and electric wiring; pipe work and covering, and fireproof building to house the same; bids must be accompanied by certified check or cash as stated in specifications; usual rights reserved; time of completion of work will be agreed upon at time of awarding of contract; specifications and plans on file in office of City Clerk, John S. Bicknell, City Hall, and may also be obtained from office of H. H. Humphrey, 1312 Chemical Bldg., St. Louis, Mo.

Electric Wiring, etc.—Office of Commissioners, District of Columbia. Sealed proposals received at this office until 2 P. M. May 10 for conduits and wiring for electric lights, conduits, outlet and junction boxes for signal wires in No. 24 Engine-house, Georgia Ave. and Rock Creek Church Rd. N. W., Washington, D. C.; blank forms of proposal, specifications and all necessary information may be obtained from chief clerk, engineer department, Room 427, District Bldg.; Cuno H. Rudolph, John A. Johnston, William V. Judson, Commissioners, District of Columbia.

Elevator.—Treasury Department, Office of Supervising Architect, Washington, D. C. Proposals will be received until 3 P. M. May 15 for electric freight elevator in United States appraisers' stores, Baltimore, Md., in accordance with specification, copies of which may be obtained at above office, or office of custodian of building, at discretion of supervising architect, James Knox Taylor.

Excavation.—U. S. Engineer Office, Nashville, Tenn. Sealed proposals for rock excavation at Tuscarawas Bar, near Sheffield, Ala., received here until 11 A. M. May 22, and then publicly opened. Information on application. Wm. W. Harts, Major, Engineers.

Engineers.—Elizabeth Askew, secretary Tampa Civic Association, Tampa, Fla., wants to correspond with experts on city planning.

Extracting Machinery.—See "Turpentine and Machinery."

Extracting Machinery.—W. M. Wayt, agent, Box 417, Lynchburg, Va., wants to correspond with manufacturers of or dealers in copper evaporating dishes, tanks, boilers, etc., to equip plant for making extracts from chestnut wood and tan bark.

Fire Engine.—Sealed proposals received until 2 P. M. June 15 for furnishing and delivering second size double-acting steam fire engine for fire department; specifications, form of proposal and necessary information may be obtained upon application to property clerk, District of Columbia, Room 320 District Bldg., Washington, D. C.; Cuno H. Rudolph, John A. Johnston, William V. Judson, Commissioners.

Flour-mill Machinery.—J. F. Imbe Milling Co., Chamber of Commerce Bldg., St. Louis, Mo., will install machinery to manufacture self-rising flour; milling plant at Belleville, Ill.

Folding Doors.—Cumberland Presbyterian congregation, Gadsden, Ala., wants prices on folding doors for \$4000 edifice.

Food Products, etc.—Sanford Wilson, Bailey, N. C., wants to correspond with manufacturers of food products, cotton bagging, etc., with view to brokerage representation.

Foundry Equipment, etc.—Baltimore Gas Appliance & Manufacturing Co., Bayard and Hamburg Sts., Baltimore, Md., wants prices on 63-inch shell cupola (63-inch shell lined up to 40 or 45 inches); fire-brick lining; blast gate (sliding type); motor-driven blower; large core drying oven; car trucks; pig-iron, coke, castings; wood and iron wheelbarrows; molder's shovels; coke forks; galvanized-wire riddles; butt stick; tapping bars; cupola sticks; soft-leather bellows; soft and hard brushes; rammers; sprinkling cans; mallets; snap flasks; wire brushes; facing; fire-clay; molding sand; core lake sand; annealed core wire; facing bags; flask pins, hinges and clamps; core chaplets; crucibles and tongs; cinder mill; round and square mills; drill and wood-turning lathe; vises; patternmakers benches; band saws; wood trimmer; pipe threader and pipe cutter; multiple drill; grinder; presses; wire straightener; notcher; shears; brakes; rolls; trucks; dust arrester; emery stands; flanging machine; forge and anvil; files; wrenches; grindstone; glue; engine lathe; Universal milling machine; electric welding machine, etc.; further information furnished, on specification list, by company.

Gasoline Engine.—See "Machine-shop Equipment."

Gasoline Engine.—J. A. Shull, Neva, Tenn., wants gasoline engine for thrashing machine.

Gas Plant.—Board of Control, Wheeeling, W. Va., will receive bids until 10 A. M. May 8 for installation of gas generators, carburetors, superheaters, washer scrubbers, condenser, two 6-horse-power steam turbines and blowing engine.

Gas-producer Plants.—Bernard Brown, Del Rio, Tex., wants to correspond with manufacturers of gas-producer plants; 30 horse-power and up; to replace gasoline engine on irrigation plant.

Glass.—Weaver Drug Co., Montgomery, W. Va., wants prices on plate and prism glass for store fronts.

Glass Store Fronts.—See "Building Materials, etc."

Grading.—J. W. Seaver, Jr., chief engineer, Southern Assembly, Waynesville, N. C., will receive bids until noon May 11 for grading $1\frac{1}{2}$ miles of driveway: plans, profiles and specifications may be seen at office of chief engineer, where bidding sheets may be obtained; each bid to be accompanied by certified check for \$100.

Grading.—Bob Parman, City Clerk, Oklahoma City, Okla., will receive bids until 5 P. M. May 8, and considered by Mayor and City Council in Council Chamber, City Hall, at 10 A. M. May 9, for grading 26th St. from Classen Blvd. to Western Ave., 27th and 28th Sts. from Classen Blvd. to Military Ave., 24th and 25th Sts. from Classen Blvd. to Ames Ave., Ames Ave. from 25th to 34th Sts., etc.; each bid to be accompanied by certified check for 3 per cent. of same; plans and specifications on file in office of City Clerk.

Handles.—See "Broom Materials."

Hardware, etc.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids May 16 for 23,700 brass rods, 38,800 bronze rods and 125,000 pounds ingot copper, schedule 3529; delivery at navy-yard, Washington, D. C.; 36,200 pounds steel castings, 34,900 pounds cold-drawn steel, 94,500 pounds hot-rolled or forged steel, 30,000 pounds forged steel, 37,000 pounds machine steel and 33,000 pounds nickel steel, schedule 3530; delivery at navy-yard, Washington, D. C.; 3000 pounds sheet lead, miscellaneous half and half solder, 18,000 pounds steel plate, 3000 pounds galvanized sheet steel, schedule 3535; delivery navy-yard, Charleston, S. C.; 896 sheets sheet tin, schedule 3535; delivery at navy-yard, Norfolk, Va.; 25,000 pounds slate, schedule 3537; delivery at navy-yard, Norfolk, Va.; for copies apply to navy pay office nearest navy-yard.

Moving-picture Machine.—R. J. Monson, Jarratt, Va., wants second-hand moving-picture machine, with pictures; electricity or acetylene gas. State price first letter.

miscellaneous brass squirt cans, etc., schedule 3538; delivery at navy-yard, Norfolk, Va.; for copies apply navy pay office nearest navy-yard.

Heating Plant.—Cumberland Presbyterian congregation, Gadsden, Ala., wants prices on steam-heating plants.

Heating Plant.—Presbyterian Church, Rev. A. R. Woodson, pastor, Manning, S. C., wants prices on hot-air furnace.

Humidors.—See "Building Materials, etc."

Ice Machinery.—Department of Interior, Washington, D. C. Sealed proposals in duplicate received until 2 P. M. May 15 for addition to ice-making system now installed in Patent Office Bldg., by substitution of ammonia system for sulphurous dioxide system, now in use, in strict accordance with specifications, copies of which may be had on application to chief clerk of department; Carmi A. Thompson, Assistant Secretary.

Jelly-factory Equipment.—M. Johnson & Son, Fort Myers, Fla., wants equipment for guava-jelly factory, including low-pressure steam boiler, boiling vats, fruit washer, etc.

Knitting Machinery.—J. C. Miller, Jefferson, S. C., wants prices and data on knitting-mill machinery and supplies.

Lavatories.—Proposals will be received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. May 9, and then opened, to furnish at navy-yard, Norfolk, Va., quantity of lavatories; applications for proposals should refer to schedule 3512; blank proposals will be furnished upon application to navy pay office, Norfolk, Va., or to the bureau; T. J. Cowle, Paymaster-General, United States Navy.

Lock and Dam.—U. S. Engineer Office, Room 415 Custom-house, Cincinnati, O. Sealed proposals for constructing lock and dam No. 14, Kentucky River, at Heidelberg postoffice, Kentucky, received here until 12 noon May 26, and then publicly opened. Information on application. John C. Oakes, Major, Engineers.

Locomotive Tender.—Pennsylvania Equipment Co., West End Trust Bldg., Broad and S. Penn Sq., Philadelphia, Pa., wants sloping-type standard-gauge tender.

Lumber.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids May 16 for 5000 feet white ash, 5000 pounds vita-lignum, 32,000 feet of white oak, 175,000 feet North Carolina pine, 52,000 feet white pine, 20,000 feet staging spruce and 12 spruce poles, schedule 3532; delivery at navy-yard, Norfolk, Va.; 5000 feet basswood, miscellaneous lot of oak, 120,000 feet white pine, 80,000 feet North Carolina, Georgia and Virginia pine, 16,000 feet yellow pine and 20,000 feet of spruce, schedule 3528; delivery navy-yard, Washington, D. C.; for copies apply to navy pay office nearest navy-yard.

Machine-shop Equipment.—Mt. Pleasant Auto & Machine Co., Ernest Irwin, president, Mt. Pleasant, Tenn., wants prices on lathes, drills, gasoline engine and machinery for general repair work.

Machine Tools, etc.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids May 23 for molding machine, schedule 3540; delivery at Charles-ton, S. C.; for copies apply to navy pay office nearest navy-yard.

Mail Order Catalogues.—Wm. H. Cather, Centre, Ala., wants to correspond with parties making specialty of printing and binding small mail order catalogues, and who furnish cuts or electrotypes for same.

Metal Ceiling.—C. C. Shelverton, 1320 Fourth National Bank Bldg., Atlanta, Ga., wants prices on metal ceilings.

Metals.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids May 16 for 23,700 brass rods, 38,800 bronze rods and 125,000 pounds ingot copper, schedule 3529; delivery at navy-yard, Washington, D. C.; 36,200 pounds steel castings, 34,900 pounds cold-drawn steel, 94,500 pounds hot-rolled or forged steel, 30,000 pounds forged steel, 37,000 pounds machine steel and 33,000 pounds nickel steel, schedule 3530; delivery at navy-yard, Washington, D. C.; 3000 pounds sheet lead, miscellaneous half and half solder, 18,000 pounds steel plate, 3000 pounds galvanized sheet steel, schedule 3535; delivery navy-yard, Charleston, S. C.; 896 sheets sheet tin, schedule 3535; delivery at navy-yard, Norfolk, Va.; 25,000 pounds slate, schedule 3537; delivery at navy-yard, Norfolk, Va.; for copies apply to navy pay office nearest navy-yard.

Moving-picture Machine.—R. J. Monson, Jarratt, Va., wants second-hand moving-picture machine, with pictures; electricity or acetylene gas. State price first letter.

Mowers.—South Park Commissioners, 57th St. and Cottage Grove Ave., Chicago, Ill., want two gasoline-driven lawn mowers; proposals received at office not later than 12 o'clock noon May 10, specifying earliest date of delivery.

Naval Supplies.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids May 16 for 500 coil baskets, miscellaneous paint brushes, 600 cases and cans, 480 hand grenades, 7600 feet of air hose, 180 feet of suction hose, 15 rectangular mirrors, 20 one-and-one-half-inch hose nozzles and 10,000 pounds of oakum; delivery at navy-yard, Norfolk, Va.; schedule 3536; 84 pair rubber boots, schedule 3542; delivery at navy-yard, Washington, D. C.; 575 barrels Portland cement, schedule 3527; delivery at navy-yard, Washington, D. C.; 27 chain boats, 200 deck lantams, 6000 feet phosphor-bronze wire rope, schedule 3534; delivery at navy-yard, Norfolk, Va.; 50,000 pounds of fire-clay, miscellaneous water-gauge glasses, 500 feet rubber hose, 40 tins of packing leathers, 40 crucibles without covers, schedule 3538; delivery at navy-yard, Norfolk, Va.; 2870 pounds recoil cylinder, schedule 3530; delivery at navy-yard, Washington, D. C.; 5200 feet of plow steel wire rope, schedule 3529; delivery at navy-yard, Washington, D. C.; for copies apply to navy pay office nearest navy-yard.

Office Furniture, etc.—Georgia Loan & Investment Co., Tifton, Ga., wants prices on office furniture, including desks, chairs, etc.

Paint Machinery.—W. H. Rogers Company, Houston, Tex., wants paint-factory machinery; new or second-hand.

Paints, etc.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will open bids May 16 for 1500 gallons boiled linseed oil and 1200 gallons asphaltum varnish, schedule 3533; delivery at navy-yard, Norfolk, Va.; for copies apply to navy pay office nearest navy-yard.

Paving Material.—City of Kissimmee, Fla., wants street-paving material. Address C. W. Dann, chairman, Box 217.

Paving.—Harris county will receive bids at office of Howe & Wise, County Engineers, First National Bank Bldg., Houston, Tex., until noon May 10 for paving Washington Rd. from city limits of Houston to Houston Heights Blvd.; alternate bids invited on vitrified brick and wood blocks; specifications on file in office of County Engineers.

Paving.—City of St. Louis, Mo., Room 300, New City Hall, will receive bids until noon May 5 for reconstructing 21st St. from Washington to Cass Ave., Benton St. from Broadway to 20th St., and 25th St. from Cass to St. Louis Ave.; plans, specifications, form of bid and other information may be had at office of Board of Public Improvements.

Paving.—O. Falk, chairman cemetery committee, Tampa, Fla., will receive bids until noon May 5 for paving 4500 linear feet driveways in Woodlawn Cemetery, 15 feet wide, making 7500 square yards; also 400 linear feet driveways, 11 feet wide, making 490 square yards; paving to be of shell, six inches deep in center and four inches deep on side; work to be under supervision of City Engineer.

Paving Brick.—John W. Hays, engineer Walnut Hill Corporation, Petersburg, Va., wants 300 yards paving brick, delivered Petersburg.

Paving.—City of Tuscaloosa, Ala., will receive bids May 4 on 4155 square yards sidewalk, 13,000 linear feet curb and 4465 linear feet combined curb and gutter; W. H. Nicol, City Engineer.

Paving.—Bob Parman, City Clerk, Oklahoma City, Okla., will receive bids until 5 P. M. May 8, to be considered by Mayor and City Council in Council Chamber, City Hall, at 10 A. M. May 9, for paving Linwood Blvd. from 10th St. to Grand Blvd. with two-inch asphaltic concrete, composed of sand-bearing gravel and Bermudez asphaltic cement, with five-inch Portland cement; concrete foundation; double driveway, each 20 feet wide; work will include grading; will also receive bids until same date for paving Agnew St from alley between Hickory and Exchange Aves. to Central Ave., total width of 64 feet; Geary Ave. from 2d to 3d St., width 26 feet; Byers Ave. from 3d to 4th St., average width 20.8 feet; material to be sheet asphalt with five-inch Portland cement concrete foundation; work will include grading; each bid to be accompanied by certified check for 3 per cent. of same; plans and specifications on file in office of City Clerk.

Paving, etc.—Charles Wheeler, Jr., City Clerk, Muskogee, Okla. (not Oklahoma City, as stated yesterday), will receive bids until 5 P. M. May 8 for grading, building necessary manholes and catch-basins, laying drainage tile, curb and gutter and paving in Street Improvement District No. 129 in

accordance with plans and specifications prepared by City Engineer; all proposals to be submitted on blanks to be obtained from City Engineer; certified check for \$100 to be deposited with each bid; bids will be opened by Mayor and City Council at City Hall at 10 A. M. May 9.

Paving.—Board of Affairs, Bluefield, W. Va., will receive bids until 7:30 P. M. May 12 for grading and macadamizing Princeton Ave. East from east end of overhead bridge to corporate limits of city; work to be of crushed limestone and to be what is known as "water-bound macadam," 16 feet wide, 8 feet on each side of center line as shown on map prepared by City Engineer and on file in his office; bids on grading and macadamizing to be separate; detailed plans and specifications prepared by City Engineer and on file in his office, and also in office of City Auditor; bids to include all costs for labor and material; S. Frazier Stowers, Mayor.

Peanut Roaster, etc.—W. Donovan, Laramie, Tex., wants new or second-hand peanut and popcorn roaster; also peanuts and popcorn.

Pipes, Valves, etc.—Bids for furnishing cast-iron coated water pipes, cast-iron coated special castings, stop valves, post fire plugs and post fire plug top parts, to be delivered at City Pipe Yard, will be received by city of St. Louis, Room 300 New City Hall, until 12 M. May 19; specifications, form of bid and other information can be had at office of Board of Public Improvements, St. Louis, Mo.

Pipe.—Clifford Well Co., Texarkana, Ark., wants prices on 200 feet of eight-inch and 570 feet of six-inch standard gas pipe.

Pipe.—Kent Company, Alexandria, La., wants prices on 1100 feet of six-inch gas and 2100 feet of four-inch line pipe.

Pipe.—City Water and Light Plant, Ruston, La., wants prices on 372 feet of 12-inch and 300 feet of 10-inch line pipe.

Platinum Ware.—U. S. Department of Agriculture, Office of Secretary, Washington, D. C. Sealed proposals will be received at office of disbursing clerk until 2 P. M. May 2 for furnishing and delivering platinum ware. Specifications and full information furnished on application to disbursing clerk. Proposals must be sealed and addressed to Secretary, in accordance with instruction on schedule. James Wilson, Secretary.

Plumbing, etc.—Presbyterian Church, Rev. A. R. Woodson, pastor, Manning, S. C., wants prices on plumbing, bathroom outfit, etc.

Plumbing.—Sealed proposals received at office of hospital in Fulton, Mo., by board of managers of State Hospital No. 1, on May 16 before 4 P. M. for repairing and replacing hot and cold-water pipes in and about buildings of institution; work under contract will be installation of piping, valves, pipe covering, fittings, etc.; removal of old piping, fittings, etc.; plans and specifications may be had from office of Charles Strong, chief engineer. All plans and specifications must be returned before bidding; bidder will enclose with proposal certified check for 5 per cent. of amount bid.

Plumbing.—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Sealed proposals will be received at this office until 3 P. M. on 5th of May, and then opened, for renovation of plumbing system at United States appraisers' stores, Baltimore, Md., in accordance with drawings and specification, copies of which may be had at this office or office of custodian of building, at discretion of supervising architect.

Plumbing.—Sealed proposals, endorsed "Proposals for Water-closets and Lavatories," will be received at Bureau of Yards and Docks, Navy Department, Washington, D. C., until 11 A. M. May 27, and then opened, for water-closets and lavatories at United States Navy-yard, Norfolk, Va.; plans and specifications can be obtained on application to Bureau or to commandant of navy-yard named. R. C. Hollyday, Chief of Bureau.

Plumbing.—See "Building Materials."

Porcelain Products.—W. W. Moore, 421 Empire Bldg., Birmingham, Ala., wants data on manufacturing porcelain products and estimates on necessary machinery.

Popcorn.—See "Peanut Roaster, etc."

Preserving Machinery.—See "Jelly-factory Equipment."

Pump.—Lake County Manufacturing Co., Tiptonville, Tenn., wants prices on deep-well pump, drop line, valves, cylinder rods, etc.

Pumps.—Bids will be received at office of Board of Control, Norfolk, Va., until 12:30 P. M. May 16 for furnishing, delivering and installing three electrically-driven centrifugal sewer pumps, including electrical apparatus, switchboard, etc.; two pumps of 1000-gallons per minute capacity, and one of 1500 gallons; plans and specifications obtainable on appli-

cation at office of W. T. Brooke, City Engineer; rights reserved; T. S. Purdie, chairman Board of Control.

Pumping Units.—Bids for furnishing general and detailed drawings, constructing and erecting in place, exclusive of foundations, at low-service pumping station, Chain of Rocks, two steam turbine-driven centrifugal pumping units complete, with condensing apparatus and all appurtenances, will be received by city of St. Louis, Room 300 New City Hall, until 12 M. June 2; plans, specifications, form of bid and other information can be had at office of Board of Public Improvements, St. Louis, Mo.

Railroad Construction, etc.—Gloucester Lumber Co., Jas. S. Silverstein, president, Rosman, N. C., wants prices on rails, etc.; also desires to correspond relative to letting contract for building standard-gauge railroad from Rosman to timber tract on Gloucester Range of G. W. Vanderbilt in North Carolina.

Rail.—Colleton Mercantile & Manufacturing Co., Ritter, S. C., wants to correspond with parties able to supply 30-pound relay rail.

Rails.—Board of Control, State Penitentiary, Baton Rouge, La., will receive bids until 12 M. May 1 for furnishing three miles 40-pound or 45-pound new steel rails, with angle bars, spikes and bolts for same.

Rails.—Wm. Walker Jones, 119 N. Person St., Raleigh, N. C., wants two miles 20-pound or 25-pound relaying or new rail. Give deal ers' prices.

Revetment.—U. S. Engineer Office, Kansas City, Mo. Proposals for constructing standard revetment on Missouri River, about four miles below St. Charles, Mo., will be received until noon May 22. Information furnished on application. Edward H. Schulz, Major, Engineers.

Road Construction.—Bids will be received at office of Highway Department of Board of State Engineers, Room 104 New Orleans Court Bldg., New Orleans, La., until Colfax to Rochelle, Grant parish, Louisiana; distance 32 miles; cash or certified check in amount equal to 5 per cent. of bid to accompany each proposal; other information, as location, character of work, etc., may be had on application at office of Highway Department; Gervais Lombard, acting State Highway Engineer; Frank M. Kerr, Chief State Engineer and president Board of State Engineers, New Orleans.

Road Construction, etc.—R. L. Montague, 52 Broad St., Charleston, S. C., wants to correspond with ditching and road-building contractors; also wants prices on ditching and road-building machinery.

Road Construction.—Allegany County Road Directors, Clinton Uhl, chairman, Cumberland, Md., will receive bids until noon May 6 for grading and macadamizing 4000 feet of cross-road between Bedford Road and Baltimore Pike, and 7000 feet of Legislative Road between Mt. Savage and Frostburg; plans and specifications by State Roads Commission, to be obtained through its office in Baltimore, Md.; each bid to be accompanied by certified check for \$300; steam roller will be furnished contractor, for which he will be charged \$5 per day; limestone will be furnished by Road Directors for 75 cents per ton free on board cars at quarry.

Road Construction.—S. Ansler & Co., McGregor, Tex., want data and information relative to road construction, including comparative cost of transportation on gravelled and dirt roads.

Road Construction.—Bids will be received at office of Highway Department of Board of State Engineers, Room 104 New Orleans Court Bldg., New Orleans, La., until May 15 on machinery as per following listed specifications: (1) one all-steel roller cane carrier chain, approximate length 700 feet; quote price per foot; also two sprocket wheels for head shaft and two drum wheels for same, f. o. b. Brazoria, Tex.; (2) one 26x60-inch cane crusher, hydraulic attachments, with small engine to drive carrier only (crusher engine not wanted) f. o. b. Sugarland, Tex.; (3) four 30-inch Weston centrifugal machines, including baskets complete, casings, spindles, spindle pulleys, top hangers and spouts (no driving apparatus required) f. o. b. Sugarland, Tex.; (4) one four-inch copper coil for 10-foot vacuum pan, made of No. 14 gauge, with necessary braces, tall pipes, and with Tobin bronze bolts and nuts, f. o. b. Brazoria, Tex.; bids, stating time of delivery, should be addressed to J. A. Palmer, secretary Prison Commission; rights reserved; Ben E. Cabell, chairman.

Tinners' Tools.—W. H. Rogers Company, Houston, Tex., wants complete outfit tanners' tools; new or second-hand.

Towboat.—U. S. Engineer Office, Vicksburg, Miss. Sealed proposals for furnishing and delivering steel hull towboat received until noon June 6, and then publicly opened. Information on application. J. A. Woodruff, Captain, Engineers.

Turpentine and Machinery.—Geo. G. Carter, Fifth Avenue Hotel, 415 Fifth Ave., Louisville, Ky., wants information on turpentine methods and amounts of production, imports and exports, and chemical process for extracting spirits and other products from resinous wood.

Typewriters.—Georgia Loan & Investment Co., Tifton, Ga., wants prices on typewriters and typewriter supplies.

Vault.—Carolina National Bank of Darlington, S. C., wants prices on vault.

Venetian Blinds.—J. S. Starr, Rock Hill, S. C., wants prices on Venetian blinds.

Water Plant.—Presbyterian Church, Rev. A. R. Woodson, pastor, Manning, S. C.,

receives bids until 5 P. M. May 8, and opened by Mayor and City Council in Council Chamber, City Hall Bldg., at 10 A. M. May 9, for construction of North Side sanitary main sewer system and stockyards sanitary main sewer system; plans and specifications on file in office of City Clerk; each bid to be accompanied by certified check for 3 per cent. of same.

Sewer Construction.—City Council, Muskogee, Okla., will receive sealed proposals at Council Chamber until 10 A. M. May 23 (proposals to be opened immediately thereafter), for construction of sections 1 to 6, inclusive, of Condy Creek sanitary outfall sewer (contracts A to F); section 1 embraces 5200 feet 48-inch sewer; section 2, 5000 feet 48-inch; section 3, 5600 feet 48-inch; section 4, 5400 feet 48-inch; section 5, 6300 feet 45-inch; section 6, 7100 feet 42-inch; alternative bids asked for two ring brick with vitrified invert and manufacturers' concrete pipe; certified check required to be 10 per cent. of amount of work bid upon; plans and specifications can be secured from T. P. Cloots, City Engineer, or at office of consulting engineer, Alexander Potter, 114 Liberty St., New York, on and after May 10, on deposit of \$10 for any or all sections; usual rights reserved; D. H. Middleton, Mayor; Charles Wheeler, Jr., City Clerk.

Sewer Construction.—Bids invited for construction of sewer system in Princess Anne, Md.; address President and Commissioners of Princess Anne, Md.

Sewer Construction.—Charles Wheeler, Jr., City Clerk, Muskogee, Okla., will receive bids until 5 P. M. May 8 for construction of sanitary sewers in Sanitary Sewer Districts Nos. 41, 52, 53, 55, 56 and 58; plans and specifications on file in office of City Engineer, from whom same may be obtained; eight-inch vitrified sewer pipe to be used; bids will be opened by Mayor and City Council at City Hall at 10 A. M. May 9.

Shears.—W. H. Rogers Company, Houston, Tex., wants pair gap shears; new or second-hand.

Sound-deadening Flooring.—All Saints Hospital, Dr. James C. Johnston, superintendent, McAlester, Okla., wants rubber or composition floor covering for old floors to deaden sound; must be sanitary and serviceable.

Sprinkling Wagons.—City of Kissimmee, Fla., wants street-sprinkling wagons. C. W. Dann, chairman, Box 217.

Stationery.—Georgia Loan & Investment Co., Tifton, Ga., wants prices on printed stationery.

Street Sprinkler.—W. S. King, Lonoke, Ark., wants prices on street sprinkler of about 450 gallons capacity.

Sugar-mill Machinery.—Sealed proposals will be received by Board of Prison Commissioners, Huntsville, Tex., until 10 A. M. May 15 on machinery as per following listed specifications: (1) one all-steel roller cane carrier chain, approximate length 700 feet; quote price per foot; also two sprocket wheels for head shaft and two drum wheels for same, f. o. b. Brazoria, Tex.; (2) one 26x60-inch cane crusher, hydraulic attachments, with small engine to drive carrier only (crusher engine not wanted) f. o. b. Sugarland, Tex.; (3) four 30-inch Weston centrifugal machines, including baskets complete, casings, spindles, spindle pulleys, top hangers and spouts (no driving apparatus required) f. o. b. Sugarland, Tex.; (4) one four-inch copper coil for 10-foot vacuum pan, made of No. 14 gauge, with necessary braces, tall pipes, and with Tobin bronze bolts and nuts, f. o. b. Brazoria, Tex.; bids, stating time of delivery, should be addressed to J. A. Palmer, secretary Prison Commission; rights reserved; Ben E. Cabell, chairman.

Tinners' Tools.—W. H. Rogers Company, Houston, Tex., wants complete outfit tanners' tools; new or second-hand.

Towboat.—U. S. Engineer Office, Vicksburg, Miss. Sealed proposals for furnishing and delivering steel hull towboat received until noon June 6, and then publicly opened. Information on application. J. A. Woodruff, Captain, Engineers.

Turpentine and Machinery.—Geo. G. Carter, Fifth Avenue Hotel, 415 Fifth Ave., Louisville, Ky., wants information on turpentine methods and amounts of production, imports and exports, and chemical process for extracting spirits and other products from resinous wood.

Typewriters.—Georgia Loan & Investment Co., Tifton, Ga., wants prices on typewriters and typewriter supplies.

Vault.—Carolina National Bank of Darlington, S. C., wants prices on vault.

Venetian Blinds.—J. S. Starr, Rock Hill, S. C., wants prices on Venetian blinds.

Water Plant.—Presbyterian Church, Rev. A. R. Woodson, pastor, Manning, S. C.,

wants prices on water plant, water tanks, etc., for \$3000 manse.

Water Systems, etc.—Rev. A. E. Brown, Asheville, N. C., wants prices on two water systems operated by four-horse-power gasoline engine, one for deep well bored, other bored well not over 80 feet deep; to furnish water for 300 people; also wants to install dynamo to furnish about 100 lights, operated by same engine.

Water-works.—C. W. Dobbins, Pleasant Hill, Mo., wants bids on construction of water-works; 1500 feet 8-inch pipe; 10,000 feet 6-inch pipe; 7500 feet 4-inch pipe; lake covering 100 acres; two 270-gallon-per-minute motor-driven pumps; 50,000-gallon tank on 50-foot tower; bids considered on plant complete or in part; plant to be completed and in operation by November 1. (Mr. Dobbins has franchise.)

Water-works.—Sealed proposals will be received at office of Constructing Quartermaster, Fort Myer, Va., until 11 A. M. May 25, and then opened, for construction of 10 inch water main from Rosslyn to Fort Myer, Va., distance of two miles; also remodeling pumphouse; certified check or security company's guarantee for 10 per cent. of amount must accompany each bid; plans and specifications will be furnished upon deposit of \$10 to insure return of plans; usual rights reserved; proposals should be endorsed "Proposals for Construction of Water Main and

Remodeling Pumphouse," and addressed to Capt. Warren W. Whitside, Constructing Quartermaster.

Well-drilling Machinery.—Gulf Coast Drilling Co., I. N. Bettison, president, San Antonio, Tex., wants prices, not later than May 20, on one or two second-hand cable tool rigs and tools with or without boilers.

Well-drilling, etc.—National Gas & Oil Co., Hutchinson, W. Va., address care Ray Isner, will receive bids on well-drilling, furnishing and erecting rigs, casing and piping.

Well-drilling.—P. F. Slons, Moorefield, W. Va., wants prices on oil-well drilling, etc., in Wayne county, Kentucky.

Windows.—Cumberland Presbyterian congregation, Gadsden, Ala., wants prices on windows for \$4000 edifice.

Wire.—U. S. Department of Agriculture, Office of the Secretary, Washington, D. C. Sealed proposals received at office of disbursing clerk until 2 P. M. Friday, May 12 for furnishing and delivering platinum ware. Specifications and full information furnished on application to disbursing clerk. Proposals must be sealed and addressed to Secretary, in accordance with instructions on schedule. James Wilson, Secretary.

Woodworking Machinery.—Westbrooks Manufacturing Co., Jackson, Miss., wants chain mortiser; also combination sash and door sticker.

Muralo Company, New Brighton, N. Y., cold-water paints and wall finishes; Chicago Varnish Co., Chicago, fine varnishes and interior stains; Bridgeport Wood Finishing Co., New Milford, Conn., manufacturer of interior stains and Wheeler wood filler, and the Ripolin Company, Ltd., Amsterdam, manufacturer of Ripolin enamel. In the line of wallpaper its stock is from such well-known firms as M. H. Birge & Sons Company, Buffalo; Robt. Graves Company, New York; Becker, Smith & Page, Philadelphia, and the imported line of Hudson-Blackley Company, New York. The Torrance Company also carries a full line of shingle stains and paint specialties.

A New Safety Shackle Hook.

One of the interesting exhibits at the American Museum of Safety, 29 W. 39th St., New York, is a patented self-closing safety shackle hook for hoisting purposes. This device was invented by F. F. Norden, and is being introduced by E. W. Marvin, care of the Foundation Company, 115 Broadway, New York. It is designed to prevent the many accidents that occur on account of the disengaging of ropes and chains from hooks while being hoisted. Briefly, the improvement consists of a detachable connection between what is the point of the usual hook and the point of suspension of the hook at the block, so that the hook is securely closed after the hoisting strap has been placed in the hook. It can be easily and quickly opened when ready, and it also adds somewhat to the strength of the hook. It has been endorsed by casualty companies and the American Museum of Safety, and full information regarding it will be furnished on request.

The Taplin-Rice-Clerkin Company.

In a letter to the Manufacturers Record the Taplin-Rice-Clerkin Company, Akron, O., manufacturer of the "Climax" stoves, ranges and furnaces, announces that notwithstanding the inconvenience caused by a temporary strike which recently occurred at the works, operations were resumed as an open shop on April 3, and a heat has been taken off every day since that time. This strike was due, as they feel, to an unwarranted demand for higher wages, although their molders were, they write, making \$4.50 to \$6 a day. The company writes that it now has the situation well in hand and is running its open shop, while its former men have been doing picket duty on the street without profit to themselves financially or morally. The action of the union in calling this strike is denounced as wholly without excuse, and the company lays the trouble to the walking delegates in large part, as they do not suffer the misfortunes of the men actually engaged in such a strike, for the walking delegate thrives by creating disturbances between employers and employees.

TRADE LITERATURE.

Glove and Mitten Manufacturers.

Dockham's American Report and Directory of the Glove and Mitten Manufacturers of the United States and Canada for 1911 has been published and can be obtained from the Dockham Publishing Co., 6 Beacon St., Boston. This is the first edition of the directory, and it was published as the result of the great demand that has existed for such a publication, and the price is \$1 per copy.

Improved Berg Cinder Car.

The William B. Pollock Company, Youngstown, O., sole manufacturer of the P. T. Berg cinder car, has issued a special booklet describing the construction of this improved cinder car. Six illustrations show the car in different positions and the action of the cinder pot in transportation and when emptying it on the slag dump. A table of general dimensions and weights is included, also a statement of the method of using it in open-hearth steel work for slag removal. This company fabricates all kinds of steel-plate construction for blast furnaces and steel works.

Paints for Electric Railways.

The Joseph Dixon Crucible Co., Jersey City, has published a folder entitled "Maintenance Painting for Electric Railways." It gives photographic illustrations of street-railway viaducts, power-plant smokestacks, and car trucks, painted with Dixon's Silicate-Graphite paint. It also emphasizes the ability of this paint to "stand up" under the corroding influences of sulphurous fumes from smoke and similar injurious agencies, as well as heat. The folder explains the especial adaptability of the paint for street-railway uses, and the paint department will

promptly send copies of the folder to anyone interested in economic railway maintenance.

Whitlock Transmission Rope.

The Whitlock Cordage Co., 46 South St., New York, with factory and warehouses in Jersey City, has issued a folder describing the manufacture and qualities for strength, wear and endurance of the Whitlock transmission rope. It states that this rope is made of very high grade manila hemp by expert ropemakers of long experience. It is lubricated with a special compound made for the purpose, which is put inside the rope and permeates every fiber, but does not discolor them. The company states this compound is absorbed by the hemp, keeps the rope moist and will not run out even at a high temperature, and is economical in first cost and also in use, owing to its durability.

Buffalo Spray Nozzles and Strainers.

The Buffalo Forge Co. of Buffalo has published booklet No. 114, describing the "Buffalo" spray nozzles and strainers, which are for use in chemical plants, blast furnaces, mine moistening, gas washing, condenser systems, cooling towers, paper mills, and for agricultural purposes and spraying insecticides, or any other purpose for which a fine spray is essential. The spray is very fine, as the whirling motion of the water produces an atomizing effect as it leaves the orifice of the nozzle. The "Buffalo" strainer was first designed to protect the "Buffalo" nozzle, but its uses have become numerous. It is very simple and can be cleaned in two minutes. Prices and sizes of both these articles are noted in the booklet.

The Otis Indicator.

"The Indicator," published monthly in the interests of the Otis Elevator Co. of New York and other cities and its co-workers, contains in Vol. 4, No. 4, several illustrations of buildings in which Otis elevators are used. These include the Carter Bldg., Houston, described in the Manufacturers Record of September 29, 1910, where it was also noted that contracts had been made for four Otis elevators. The Butler Bldgs. at Dallas and St. Louis, with their Otis elevator installations, are also included in this number of the "Indicator." Other items are an illustrated descriptive article on "Horizontal Hydraulic Machines," a "Message to Garcia" talk, and a full-page illustration of the Otis elevator with alternating current, double screw, geared traction machine for basement installations.

Centrifugal Pumping Machinery.

The Erie Pump and Engine Works, Erie, Pa., in issuing booklet No. 26, announces that a general catalogue containing detailed information and illustrations will be received from the press in a short time, and will be sent to interested persons on request. Booklet 26 contains various styles and types of pumps, with brief descriptions and a statement of the various uses to which they are applicable. These include pumps for paper and pulp mills, tanneries, dyehouses, electrolytic foundries, cotton and woolen mills, draining and irrigating land, pumping out drydocks and cofferdams, pumping out vessels in wrecking operations, dredging harbors, pumping sand and gravel, circulating water in condensers, filtration and purification plants, ice and refrigerator plants, handling sewage, for use in rubber manufacturing plants, etc.

Corey, and What It Is.

The Jemison Magazine, published by the Jemison Real Estate & Insurance Co., Birmingham, has issued a "special Corey edition." In this edition every phase of the development of the town of Corey is covered and numerous large photographic illustrations show in an impressive way what has been done at Corey since it was established. This issue contains four articles of general and educational interest by George H. Miller, landscape architect of Boston, including the article published in the Manufacturers Record of March 16, 1911, by Mr. Miller, under the title of "Sanitation and Esthetics in Creating a City." Corey has been planned and developed by private capital and enterprise to create a home and business center for the population which was bound to settle in the vicinity of the great industries that are being established there. This magazine is full of information about Birmingham and Corey. It will prove interesting to the general public for the principles of civic development involved, which may be made applicable to many progressive communities.

Lehigh Portland Cement in Chimney Construction.

A pamphlet has been issued by the Lehigh Portland Cement Co., People's Gas Building,

INDUSTRIAL NEWS OF INTEREST

Mill and Contractors' Supplies.

The Price Hardware Co., Pulaski, Va., has added a large line of mill and contractors' supplies to its wholesale and retail hardware business. In order to reach the trade effectively in Virginia, Tennessee and North Carolina, traveling salesmen have been sent to those sections to represent the company in its various lines of business.

Increasing Fenestra Facilities.

The Detroit Steel Products Co. announces that its New York office has been removed from 2 Rector St. to 225 Fifth Ave. for the purpose of increasing the facilities to meet the growing demand for Detroit Fenestra windows. Raymond H. Kinnear is the manager of this office.

Bundy Steam Traps.

The American Radiator Co., 282-286 Michigan Ave., Chicago, has sold its Bundy steam trap business to the Nashua Machine Co., Nashua, N. H., to whom all orders or inquiries should be directed. The manufacture and sale of the "Bundy Steam Trap" will be carried on by the Nashua company with energy and a determination to continue the high standard already established for it.

Addition to Murray Iron Works.

The Murray Iron Works Co., Burlington, Ia., has made an extensive addition to its boiler shops. This consists of a steel-frame building 120x40 feet, with a large traveling crane down the middle section and smaller ones on the sides, all of which enables the company to produce a larger output of water-tube, tubular and fire-box boilers to meet the constantly increasing demand.

To Handle International Steam Pump Publicity.

Henry R. Cobleigh, who has been for seven years the mechanical editor of The Iron Age, has resigned that position to take charge of the publicity department of the International Steam Pump Co., 115 Broadway, New York. The advertising and publication matters of this company will hereafter be handled by this department, the expansion of its business requiring a proportional development of its publicity possibilities.

New Agency for Milwaukee Mixers.

The Contractors' Machinery & Supply Co., Steuben and Carson Sts., Pittsburgh, has secured the contract as direct representative, covering the district of Western Pennsylvania, Ohio and West Virginia, of the well-known "Milwaukee Mixer," manufactured by the Milwaukee Concrete Mixer & Machinery Co. of Milwaukee. The Contractors' Machinery & Supply Co. handles contractors' equipment of various kinds, including hoisting engines, derricks, concrete mixers, air compressors, boilers, engines, pumps, crushers, dump cars, dump buckets, locomotives, rails, etc., and has agency for National hoisting engines, Sidney scrapers, wheelbarrows and grading plows.

Cramer Furniture Co.

The new standard mill-construction brick buildings of the Cramer Furniture Co. of

Thomasville, N. C., are nearing completion and the machinery is expected to be in operation by July 1. Complete fire protection and all modern improvements are being installed in the whole plant. The company, with its complete equipment, will be able to manufacture furniture at the lowest cost free of excessive insurance rates. The cane webbing department will be improved and additional machinery added, with the view to greatly increasing the output to meet the demand for this product in furniture and car-seat construction. The company will maintain a reed and rattan buyer in the East to secure an adequate supply of the best materials for the Thomasville and High Point districts, as well as the company's factory. These improvements will insure employment to a large number of additional operatives.

Good Contracting Business.

T. L. Talbert, contractor, Charlotte, N. C., reports that the volume of business for the past six weeks has been very satisfactory and the outlook for future business is encouraging. He has secured contract to equip the Selwyn Hotel, Charlotte, with two fire-escapes of ornamental stairway construction, to be furnished by the Norfolk Wire & Iron Works of Norfolk. He also supplied the necessary steel work for the Charlotte Steam Laundry building, Garibaldi Bruns & Dixon and the T. W. Wade buildings in Charlotte, as well as for the church buildings at Lumberton and Marvin, N. C. The steel was purchased from the Phoenix Iron Works Co., Philadelphia. Mr. Talbert is also supplying from the Berger Manufacturing Co., Canton, O., its sidewalk lights for the T. W. Wade building, and for the new store building now being erected by T. D. Alexander at Charlotte.

Large Business in Mill Supplies.

The Lufkin Foundry & Machine Co. of Lufkin, Tex., in a letter to the Manufacturers Record, states that an increase in capitalization from \$120,000 to \$200,000 has been made to facilitate the handling of an increasing business and to carry a much larger stock to meet the demands of trade. Its business has been growing for the past five years at a rapid rate, especially in mill supplies. A large brick and steel boiler and blacksmith shop has recently been erected and equipped with new tools, and foundry and machine shop has been improved to meet the demand for the high-grade sawmill machinery. This company deals in mill supplies, engines, boilers, etc., and does general repairing, making repairs of locomotives a specialty.

Increasing Trade in Paints, etc.

Painting and interior decoration work are rapidly developing in the South on account of the increased building operations now in evidence everywhere throughout that section. The Torrance Paint Co., Charlotte, N. C., has been prominent in this class of work for a number of years in North and South Carolina and reports a good and increasing business. This company is a representative in this territory for A. Wilhelm Company, Reading, Pa., paint manufacturer;

Chicago, showing a number of tall concrete chimneys of recent design and construction. These chimneys are the Weber cylindrical and Weber coniform types, built by the Weber Chimney Co., 1909 Republic Bldg., Chicago, and it is noted that this well-known company specifies Lehigh Portland cement in all its construction work. Full-page illustrations of 12 of these chimneys are shown, with description of Weber chimneys and methods of construction, with dimensions of those illustrated. The Lehigh Portland Cement Co. has branch offices at Allentown, Pa.; Indianapolis; Boston; Newcastle, Pa.; Philadelphia and Memphis. Its mills are located at Ormrod, West Coplay, Fogelsville and Newcastle, Pa.; Wellston, O., and Mason City, Ia. These mills have an annual capacity of 11,000,000 barrels.

A Generous Catalogue.

The George M. Newhall Engineering Co., 136 S. 4th St., Philadelphia, has issued for distribution to steam users "The Engineer's Reference Book and Vance Steam Trap Catalogue," of which a large part is composed of extracts from Kent's Mechanical Engineer's Pocket Book. The object of the catalogue is to acquaint steamfitters, users and dealers in steamfittings with the construction and advantages of the Vance steam trap. Its construction is described and illustrated and the necessary tables and rules for determining dimensions, etc., are given. A list of 50 of the most prominent users of this steam trap is included, also a number of letters of recommendation. In addition to its value for the information it contains regarding the Vance steam trap, this catalogue is useful as an engineer's pocket reference book.

Pointers for Road Roller Engineers.

Manufacturers of road machinery are interested in having their products well taken care of, for the benefit of the builder as well as the owner, whose opinions of the machines are influenced by the returns and durability shown. With this in view the Buffalo Steam Roller Co. of Buffalo has published for distribution a booklet, "Useful Hints for Road Roller Engineers," which contains valuable information on the care and use of road rollers, particularly referring to its Buffalo Plits Rollers. Descriptions of the working parts of the roller are given, with directions for starting and operating it, including getting up steam, maintaining the fires, starting the engine, operating force-feed oil pump, injectors, cleaning the tubes, washing out the boilers and precautions for safety of boilers, operating the roller on the road, etc.

International Steam Pump Co.

William Salomon & Co., bankers, 25 Broad St., New York, have issued for investors in bonds a booklet in the interest of the International Steam Pump Co., 115 Broadway, New York. The booklet is designed to present the character and stability of the business of the International Steam Pump Co., which since its incorporation in 1899 has included the well-known Worthington and other leading pump-manufacturing companies. The business not only includes the manufacture of the steam pumps for every industrial use, but also the manufacture of gas engines, gas-producer plants, etc. The bonds of the company are listed on the Stock Exchange in New York city and Amsterdam, and are also sold in England. This booklet contains illustrations of the subsidiary plants of the company and a statement of the rapidly increasing output.

Hanna Machines.

Hanna shakers and dumping riddles, manufactured by the Hanna Engineering Works, 2659 Elston Ave., Chicago, are described and illustrated in a folder issued by the company. This company manufactures foundry equipment, pneumatic compression and electric percussion riveters, screen shakers, dumping riddles, mold dryers, reamers, vibrators, blow guns, sand blasts and Rathbone multiple molding machines. It is stated in the folder that the Hanna shakers and dumping riddles were primarily designed for foundry use, but they are now widely used where the sifting of material in quantity is desired, as in silica mills, potteries, tile shops, experimental laboratories, glass factories, mines, etc. It is claimed that one of these machines will save its cost price before it is necessary to pay for it, and mention is made that over 800 firms in the United States and Canada have the shaker and riddle machines in use, some having as many as 27 of them.

Atlantic Garden Pottery.

The Atlantic Terra-Cotta Co., 1170 Broadway, New York, with factories at Tottenville, N. Y.; Rocky Hill and Perth Amboy, N. J., has issued a booklet showing replicas of antique Grecian and Italian jars, vases and sun-dial pedestals for use in formal and old-fashioned gardens and for house, courtyard and pergola decorations; also reproductions of designs by the best modern landscape architects. These articles are made in terra-cotta, and as the originals in Greek and Italian work were made of terra-cotta, these are not imitations, but rather duplications, and as they are unaffected by climatic conditions are practically eternal in durability. These articles are made in five colors and either glazed or standard. A price-list, with dimensions and reference to the specified design, is given on last page. These garden pottery articles are made in addition to the large line of architectural terra-cotta and polychrome faience manufactures of this company.

ville, N. Y.; Rocky Hill and Perth Amboy, N. J., has issued a booklet showing replicas of antique Grecian and Italian jars, vases and sun-dial pedestals for use in formal and old-fashioned gardens and for house, courtyard and pergola decorations; also reproductions of designs by the best modern landscape architects. These articles are made in terra-cotta, and as the originals in Greek and Italian work were made of terra-cotta, these are not imitations, but rather duplications, and as they are unaffected by climatic conditions are practically eternal in durability. These articles are made in five colors and either glazed or standard. A price-list, with dimensions and reference to the specified design, is given on last page. These garden pottery articles are made in addition to the large line of architectural terra-cotta and polychrome faience manufactures of this company.

Ames Engines and Boilers.

Vim engines, Regal engines and tubular boilers manufactured by the Ames Iron Works, Oswego, N. Y. (with branch offices in Singer Bldg., New York; Board of Trade Bldg., Boston; Arcade Bldg., Philadelphia; Fisher Bldg., Chicago; Bastable Bldg., Syracuse, N. Y.; Dallas, Tex., and other cities), are described and illustrated in the company's catalogue. The company's shops are equipped with the largest and most improved machinery for building and handling general plate work, as well as special boilers of all types and estimates. Tables and dimensions are given of the Vim portables, detached portables and agriculturals of throttling-type engines, also of automatic types. The Regal engines of different types and the Ames high-speed center-crane automatic engine, direct-connected type, are represented in full-page illustrations. A complete line of boilers with tables, Dutch ovens and standard setting for different types of boilers, etc., are illustrated.

The Products of Kennicott.

The Kennicott Company, Chicago Heights, Ill., in addition to its large Kennicott catalogue, has issued a booklet entitled and briefly describing "The Products of Kennicott," with special reference to the Kennicott water softener made in the form of an automatic apparatus for treating varying quantities of water. The Kennicott method is continuous in its action, automatically starting and stopping with the flow of water, and is particularly adapted to industrial use at a cost of from one to two cents per 1000 gallons. Other products of Kennicott are filters, standpipes, steel tanks and towers for water storage, smokestacks and boiler breechings, horizontal return tubular and water-tube boilers, washout systems for locomotive boilers, car tanks, tender tanks, track troughs, and all kinds of steel plate and structural work. Sectional catalogues for each "product" will be sent on request, naming section required.

Best Manufacturing Co. Publications.

General catalogue No. 103 of the Best Manufacturing Co., Pittsburgh, with works at Oakmont, Pa., contains prices and information concerning bends, valves, flanged pipe or other parts of modern piping systems. It also contains descriptions, lists and dimensions for valves, fittings, flanges, etc., for pressures from 25 pounds to 1500 pounds in cast iron, semi-steel, malleable iron, cast steel and forged steel. Folder No. 102 is a price-list applying to fittings and flanges; folder No. 101 contains standard tables on valves, fittings, flanges, pipes, bends, etc. This folder is printed on cloth and contains 39 valuable tables referring to "Best" products and useful tables for pipe handlers. Folder 101 will be sent on request to anyone giving name, address, occupation and name of company with whom engaged, and the others will be sent on request. The use of the price-list has been made easy by giving one set of prices for both standard and heavy materials, with different discounts for the two classes of material.

New York Dock Co.

A booklet issued by the New York Dock Co., 10 Bridge St., New York, describes, with numerous illustrations, the great bonded and free warehouse system of the company, extending for three miles along the water front of Brooklyn, with immense piers and all other accommodations needed for handling vessels, cargo, incoming and outgoing freight by railroad or steamship, reached by five ferries and in close proximity to the Brooklyn and Manhattan bridges. In addition to the warehouse and pier system the company operates three railroad terminals, and is the agent of all the railroad lines entering New York, and of the coastwise,

river and sound steamboat lines. A point of particular interest to manufacturers and merchants is that they may locate factories or store their goods on the company's property with advantages, in that they save money by the elimination of cartage, etc., by loading their goods directly into cars for shipment to all points. Correspondence is invited regarding any branch of its business, including money transactions on merchandise stored, and the booklet will be sent on request of persons interested.

Metal Ceilings and Side Walls.

The Edwards Manufacturing Co., Eggleston Ave., 4th to 5th Sts., Cincinnati ("The Sheet-Metal Folks"), with New York office at 81 Fulton St., and San Francisco office, 315-319 Monadnock Bldg., has published its new 1911 catalogue of metal ceilings and side walls. This catalogue is 10x13 inches and contains 186 pages of highly ornamental and attractive designs, with directions for measuring, handling and applying the materials. Twelve pages are given to the company's new line of Italian Renaissance designs, which will appeal to architects owing to their richness and simplicity as accurately depicted in the catalogue. The book will make a valuable addition to the catalogue files of architects, builders and dealers in this material. Sales can be made from the catalogue without the necessity of individual salesmen or dealers keeping a large stock on hand. It is the policy of the company to have a representative in each community to handle this complete line of metal ceilings and side walls, and correspondence in this connection is solicited.

Niagara Lead & Battery Co.

The steady advancement in the manufacture and use of storage batteries and improvement in their structure to meet rough usage to which they are subjected in automobiles, etc., brings this important mechanical element prominently before the public. The Niagara Lead & Battery Co., with offices and works at Niagara Falls, N. Y., gives a comprehensive exposition of its products in its various catalogues, of which Nos. 12, 13, 14 and 16 treat, respectively, of the Salom storage batteries for electric-vehicle propulsion, automobile electric lighting, fire-department apparatus and motor-boat electric lighting. A booklet, "Salom Storage Batteries for All Purposes," refers to this new era in storage batteries and describes the construction of old-form batteries and the basic principle of storage batteries, with a brief historical sketch of their development. It then gives the Salom process, with the claims of superiority of the Salom plates, the tests which they have withstood, capacity, economy in cost and use, etc. The manufacturers of "electrics" are looking to the South and Southwest for large developments in the use of their vehicles, with the advent of extensive hydro-electric plants giving cheap power, and the good-roads extensions. The need of storage plants for use when the usual electric plant is overloaded or temporarily not available in factories, etc., also makes a field for the use of large storage-battery installations.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., May 3.

The Baltimore stock market was quite active during the past week, and there was a good demand for bonds throughout. The trading showed sales as follows: United Railways common, 18 3/4 to 18 3/4; do. trust certificates, 18 3/4 to 18 3/4; do. incomes, 64 1/2 to 64 1/2; do. funding 5s, 86 to 87 1/2; do. do. scrip, 86 1/4 to 87; do. 4s, 84 to 84 1/2; Consolidated Gas, Electric Light & Power common, 90 1/2 to 90 1/4; do. preferred, 96 1/2 to 97; do. 4 1/2s, 88 1/2 to 88 1/4, with last sale at 88 1/2; do. notes, 100; Consolidated Gas 4 1/2s, 97 to 97 1/2; Seaboard Air Line common, 25 3/4 to 25 1/2; Seaboard Company common, 26 1/4 to 27 1/2; do. second preferred, 58 1/4 to 59, with last sale at 58 1/2; Seaboard 4s, stamped, 87 1/2 to 87; do. adjustment 5s, 78 3/4 to 79 1/2; Consolidated Cotton Duck, 4 to 23 1/2, with last sale at 3; do. preferred, 19 to 21, reacting to 19; Mt. Vernon-Woodberry Cotton Duck 5s, 74 1/2 to 75 1/2; G.-B.-S. Brewing common, 1; do. 4s, 44.

Bank stocks sold as follows: Bank of Commerce, 31 1/4 to 31 1/4; Mechanics', 29; Merchants', 187 to 190; Howard, 13 3/4 to 13 3/4; Union, 136.

United States Fidelity & Guaranty sold at 100; Continental Trust, 223 to 227; Maryland Casualty, 90; Union Trust, 70 1/4; Maryland Trust common, 80 to 81; Mercantile Trust, 145.

Other securities were traded in thus. Atlantic Coast Line of Connecticut stock, 230 to 240; do. 5-20s, 92 to 93 1/2; Norfolk & Portsmouth Traction 5s, 80 1/4 to 90; Western North Carolina 6s, 104 1/2 to 104 1/2; Anacostia & Potomac 5s, 100 1/4 to 101; do. guaranteed, 102 1/2 to 102 1/2; Carolina Central 4s, 91 1/4 to 92; Detroit United 4 1/2s, 81 1/4 to 81 1/2; Florida Southern 4s, 91 1/2; Georgia & Florida common, 11; Houston Oil common, 7 1/2 to 8 1/2, with last sale at 8; do. preferred, 52 to 55; Maryland Electric 5s, 98 1/4 to 99 1/4, with last sale at 99; Suffolk & Carolina 5s, 102 1/2; Virginia Railway & Power 5s, 97 1/2 to 97 1/2; Atlantic Coast Line Consolidated 4s, 95 1/2; do. convertible debenture 4s, 97 1/2 to 98; Baltimore City 3 1/2s, 1880, 90; Macon, Dublin & Savannah 5s, 97 1/2; Northern Central Railway stock, 127 to 127 1/4; Norfolk & Atlantic Terminal 5s, 92 to 93; Pennsylvania Water & Power 5s, 88 1/2 to 89 1/2; Atlanta Consolidated Street Railway 5s, 105; Baltimore Brick 5s, 82 1/2; Charleston & Western Carolina 5s, 106 1/2 to 106 1/2; Minneapolis Street Railway and St. Paul City Railway joint 5s, 104 1/2; Fairmont & Clarksburg Traction 5s, 99 to 99 1/2; Virginia Century, 86; West Virginia Central 6s, 100 1/2; Baltimore Electric 5s, stamped, 94 1/2 to 95; Coal & Iron Railway 5s, 101 1/2; Georgia, Carolina & Northern 5s, 105; Maryland & Pennsylvania incomes, 62 1/2; Baltimore Traction 5s, 107; Alabama Consolidated Coal & Iron preferred, 72; do. 5s, 86 to 88, with last sale at 87 1/2; Chicago Railway 5s, 100; West Penn Traction 5s, 97; Baltimore City Passenger 5s, 100 1/2; Baltimore, Sparrows Point & Chesapeake 4 1/2s, 97; Georgia & Alabama Consolidated 5s, 105 1/2 to 105 1/4; Norfolk & Portsmouth Traction 5s, 103 1/4 to 103; Baltimore City 5s, 1916, 104; Milwaukee Refunding 4 1/2s, 92 1/2; Newport News & Old Point 1st 5s, 92 1/2; Baltimore Electric preferred, 42; Washington & Vandemere 4 1/2s, 95; Atlantic Coast Line, Louisville & Nashville collateral trust 4s, 94 1/2; City & Suburban (Baltimore) 5s, 105; Jamison Coal & Coke, George's Creek scrip, 93; do. 5s, 94 1/2; Western Maryland 4s, 86 1/4 to 87 1/2; Maryland 3s, 1914, registered, 96 1/2; Augusta & Aiken Railway & Electric Corporation, 18; Louisville & Nashville Railroad stock, 146 1/2; Atlantic Coast Line stock, 124; Georgia Southern & Florida 5s, 106 1/2; Fairmont Coal 5s, 97 1/2.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended May 3, 1911.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast of Conn.	100	237	241
Aug.-Aiken R. & E. Corp.	100	19	...
Charleston Consolidated.	50	34	...
Georgia Sou. & Fla.	100	39	40
Georgia Sou. & Fla. 1st Pfd.	100	92 1/2	94
Georgia Sou. & Fla. 2d Pfd.	100	80	...
Norfolk & Ports. Trac. Pfd.	100	80	...
Seaboard Co. Common.	100	27	27 1/2
Seaboard Co. 1st Pfd.	100	85	87 1/2
Seaboard Co. 2d Pfd.	100	58 1/2	58 1/2
United Rys. & Elec. Co.	50	18	18 1/2

Bank Stocks.

Bank of Baltimore.	100	154 1/2	155 1/2
Bank of Commerce.	15	31 1/2	...
Citizens.	10	40	41 1/2
Drovers & Mechanics'.	100	22 1/2	22 1/2
Farmers & Merchants'.	40	51	...
First National.	100	148	150
Howard.	10	13 1/2	...
Martine.	30	42	...
Mechanics'.	10	28 1/2	...
Merchants'.	100	190	...
Old Town.	10	13 1/2	14
Union.	100	125	...
Western.	20	40	...

Trust, Fidelity and Casualty Stocks.

Baltimore Trust.	100	...	165 1/2
Continental Trust.	100	225	227 1/2
Fidelity & Deposit.	50	175	185
Fidelity Trust.	100	219	...
Maryland Trust.	100	80 1/2	86
Maryland Trust Pfd.	100	111	...
Maryland Casualty.	25	...	90
Mercantile Trust & Deposit.	50	...	145 1/2
Union Trust.	50	70 1/2	70 1/2
U. S. Fidelity & Guaranty.	100	158	...

Miscellaneous Stocks.

Ala. Con. Coal & Iron.	100	71	40
Ala. Con. Coal & Iron Pfd.	100	71	72
Con. Cotton Duck Common.	50	3	4
Con. Cotton Duck Pfd.	50	20	21
Con. Gas, Elec. Lt. & P. Com.	100	90	90 1/2
Con. Gas, Elec. Lt. & P. Pfd.	100	96 1/2	97
Consolidation Coal.	100	...	103
Atlantic Coast 1st 4s.	55 1/2
Atlantic Coast Conv. Debent. 4s.	97 1/2	...	98
At. Coast. (Conn.) 4s, Ctrfs. 6-20s.	93	93 1/2	...
Atlantic Coast (Conn.) 5s, Ctrfs.	105
Balto. & Annapolis S. L. 5s.	65	67 1/2	...
Carolina Central 4s.	91 1/2	92	...

Charleston & West. Car. 5s.	107
Coal & Coke Railway 5s.	93 97
Coal & Iron Railway 5s.	101 1/2 101 1/2
Florida Southern 4s.	91 1/2 92
Georgia & Alabama 7s.	105 1/2 105 1/4
Georgia & Florida 5s.	79 3/4 80 1/4
Georgia, Car. & North, 1st 5s.	105 1/4
Georgia South, & Fla. 1st 5s.	106
Macon, Dublin & Savannah 5s.	98
Petersburg Class B 6s.	115
Piedmont & Cumberland 1st 5s.	100
Potomac Valley 1st 5s.	105
Savannah, Fla. & West. 6s.	124 1/2
Seaboard 4s, Stamped.	87 87 1/2
Seaboard Adjustment 5s.	79 1/2 79 1/2
Seaboard & Roanoke 5s.	104 105
Seaboard & Roanoke 6s.	105
Seaboard & Roanoke 7s.	107
Southern Railway Con. 5s.	107 1/2 107 1/2
Southern & Carolina 5s.	102 1/2 104
Western Maryland 4s.	86 1/2 87 1/2
Western N. C. Con. 6s.	104 105
West Va. Con. 1st 6s.	100 1/2 100 1/2

Street Railway Bonds.

Anacostia & Potomac 5s.	101 101 1/4
Anacostia & Potomac 5s, Gtd.	102 1/2 102 1/2
Atlanta Con. St. Ry. 5s.	105 105 1/2
Augusta Railway & Electric 5s.	102 1/2 103 1/2
Baltimore City Passenger 5s.	100 1/2
Baltimore, S. P. & C. 4 1/2s.	96 1/2 97 1/2
Baltimore Traction 1st 5s.	107 107 1/2
Charleston City Railway 5s.	103
Charleston Con. Electric 5s.	96 1/2
City & Suburban 5s (Balt.)	105 1/2
City & Suburban 5s (Wash.)	102 1/2 103 1/2
Fairmont & Clarkston Trac. 5s.	99 99 1/2
Knoxville Traction 5s.	105 107 1/2
Lexington Railway 1st 5s.	85
Maryland Electric Railways 5s.	99 99 1/2
Metropolitan 5s (Wash.)	106 1/2
Newport News & Old Point 5s.	93 1/2 96
Newport News & Old Pt. G. M. 5s.	64
Norfolk & Portsmouth Trac. 5s.	89 1/2 90
Norfolk Railway & Light 5s.	93 1/2 100
Norfolk Street Railway 5s.	105
Richmond Traction 5s.	104 1/2 106
United Railways 1st 4s.	84 1/2 84 1/2
United Railways Income 4s.	64 64 1/2

Miscellaneous Bonds.

Ala. Con. Coal & Iron 5s.	87 87 1/2
Baltimore Brick 5s.	82 83
Baltimore Electric 5s, Stp.	94 1/2 95
Consolidated Gas 5s.	108 1/2 109
Consolidated Gas 4 1/2s.	97 1/2 97 1/2
Fairmont Coal 1st 5s.	97 97 1/2
G. B. S. Brewing 1st 4s.	43 1/2 44
G. B. S. Brewing Income 5s.	5
Mt. Vernon Woolly Cot. Duck 5s.	75 1/2 75 1/2
United Elec. Lt. & P. 4 1/2s.	92 1/2 94

SOUTHERN COTTON-MILL STOCKS.**Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending May 1.**

Bid.	Asked.
Abbeville Cotton Mills (S. C.)	76
Aiken Mfg. Co. (S. C.)	80
American Spinning Co. (S. C.)	160
Anderson Cotton Mills (S. C.)	48
Anderson Cot. Mills (S. C.) Pfd.	100
Arcadia Mills (S. C.)	98
Arkwright Cotton Mills (S. C.)	99 100
Augusta Factory (Ga.)	40
Avondale Mills (Ala.)	116
Belton Mills (S. C.)	130
Brandon Mills (S. C.)	96 108
Brogan Mills (S. C.)	90
Cannon Mfg. Co. (N. C.)	125
Cabarrus Cotton Mills (N. C.)	130 135
Chadwick Mfg. Co. (N. C.) Pfd.	100
Chiquila Mfg. Co. (S. C.)	170
Clifton Mfg. Co. (S. C.)	85
Clinton Cotton Mills (S. C.)	120
Columbus Mfg. Co. (Ga.)	98
Courtney Mfg. Co. (S. C.)	100
Dallas Mfg. Co. (Ala.)	96
Darlington Mfg. Co. (S. C.)	80
D. E. Converse Co. (S. C.)	90
Drayton Mills (S. C.)	95 100
Eagle & Phenix Mills (Ga.)	117
Easley Cotton Mills (S. C.)	165 175
Enoree Mfg. Co. (S. C.)	50 55
Enoree Mfg. Co. (S. C.) Pfd.	96 100
Enterprise Mfg. Co. (Ga.)	65 76
Exposition Cotton Mills (Ga.)	200
Gaffney Mfg. Co. (S. C.)	60 72
Gainesville Cotton Mills (Ga.)	72 80
Glenwood Cotton Mills (S. C.)	150
Gluck Mills (S. C.)	102 106
Granby Cot. Mills (S. C.) Pfd.	35 45
Graniteville Mfg. Co. (S. C.)	140 145
Greenwood Cotton Mills (S. C.)	57 60
Grendel Mills (S. C.)	90 103
Hartsville Cotton Mill (S. C.)	160 175
Henriette Mills (N. C.)	160 175
Inman Mills (S. C.)	100 108
King Mfg. Co. (J. P. (Ga.)	80 85
Lancaster Cotton Mills (S. C.)	130
Lancaster Cot. Mills (S. C.) Pfd.	97 100
Langley Mfg. Co. (S. C.)	104
Laurens Mills (S. C.)	127
Limestone Mills (S. C.)	155 160
Lockhart Mills (S. C.)	68
Lockhart Mills (S. C.) Pfd.	100
Loray Cotton Mills (N. C.) Pfd.	95 97 1/2
Marlboro Cotton Mills (S. C.)	80
Mills Mfg. Co. (S. C.)	102 105
Mollohan Mfg. Co. (S. C.)	95 105
Monaghan Mills (S. C.)	100
Monarch Cotton Mills (S. C.)	105
Newberry Cotton Mills (S. C.)	125
Ninety Six Cotton Mills (S. C.)	130 150
Norris Cotton Mills (S. C.)	121 130
Olympia Cotton Mills (S. C.)	90
Orr Cotton Mills (S. C.)	95
Pacolet Mfg. Co. (S. C.)	86
Pacolet Mfg. Co. (S. C.) Pfd.	95 100
Pelzer Mfg. Co. (S. C.)	169
Piedmont Mfg. Co. (S. C.)	175 177
Poe Mfg. Co. (F. W. (S. C.)	110 125
Saxon Mills (S. C.)	130
Sibley Mfg. Co. (Ga.)	65 68
Spartan Mills (S. C.)	125 132
Trion Mfg. Co. (Ga.)	130
Tucapau Mills (S. C.)	310 350
Union-Buffalo (S. C.) 1st Pfd.	74 80
Union Buffalo (S. C.) 2d Pfd.	16
Victor Mfg. Co. (S. C.)	110 115
Warren Mfg. Co. (S. C.)	90 95
Warren Mfg. Co. (S. C.) Pfd.	100 105
Washington Mills (Va.)	28
Washington Mills (Va.) Pfd.	106 110
Whitney Mfg. Co. (S. C.)	110
Wiscasset Mills (N. C.)	135
Woodruff Cotton Mills (S. C.)	110 118
Woodside Cotton Mills (S. C.)	95 100
Watts Mills (S. C.)	80 90
Williamston Mills (S. C.)	120 125

The American Cotton Oil Co. has declared a semi-annual dividend of 3 per cent. on its preferred stock and a semi-annual dividend of 2 1/2 per cent. on its common stock, both payable June 1 at Winslow, Lanier & Co.'s, 59 Cedar street, New York city. Justus E. Ralph is secretary.

FINANCIAL CORPORATIONS.

Ola., Addington.—Reported that the First National Bank has been chartered with \$25,000 capital; L. A. Wilson, president; M. W. Dimery, vice-president; J. E. Evans, cashier, and J. L. Evans, assistant cashier.

Ola., Braman.—The First National Bank is reported chartered; capital \$25,000; G. E. Dowis, president; W. H. Franks, vice-president, and L. G. Lenker, cashier.

Ola., Hanna.—The Farmers' State Bank, capital \$15,000, is reported incorporated by L. J. Spillman, W. W. Winston, Gilbert Huls of Hanna; John W. Gilliland and T. T. Godfrey of Holdenville and W. C. Henry of Rainford.

Ola., Hominy.—The National Bank of Commerce is reported chartered; capital \$25,000; L. D. Edington, president; E. C. Mullendore, vice-president; C. Mullendore, cashier. This is a conversion of the Bank of Commerce.

Ola., Kingston.—Official: The First State Bank began business April 24; capital \$15,000; J. T. H. Lipscomb, president; E. H. Coulter, vice-president; C. B. Millions, cashier; C. C. Chestnut and Dr. J. L. Gaston, directors.

Ola., Pond Creek.—The Farmers' National Bank is reported chartered; capital \$25,000; O. S. Kelly is president and E. Grimes cashier.

Ola., Shawnee.—The National Bank of Commerce is reported chartered; capital \$100,000; Wallace Estill, Jr., president; A. L. Fluke, vice-president; L. C. Webster, cashier; W. G. Reynolds, assistant cashier.

Ola., Terilton.—Official: The First National Bank of Terilton, which is a conversion, is chartered with \$25,000 capital; Theodore Hayden, president; J. E. Flare, vice-president; J. Martin Hayden, cashier; C. J. Sharpe, director. Business began April 17.

Ola., Vaillant.—Official: The First National Bank of Vaillant, succeeding the Bank of Vaillant, chartered; capital \$25,000. Business began April 18. J. M. Cecil is president.

S. C., Clinton.—The Security Building & Loan Association of Clinton is reported to have been granted a commission; capital \$5,000. Petitioners, J. A. Bailey, W. H. Simpson, A. B. Galloway, C. M. Stone, B. L. King and J. D. Bell.

S. C., Darlington.—Official: The Carolina National Bank of Darlington is a conversion of the County Savings Bank; capital \$50,000; surplus \$2000. C. B. Edwards, president; T. P. Rhodes, vice-president; L. T. Welling, cashier; S. Vaughan, W. F. Harper, L. S. Welling, Geo. H. Edwards, L. M. Lawson and D. C. Reynolds, directors. Business as a National bank began on April 22.

S. C., Greenville.—Official: The Realty Trust Co. chartered; capital \$100,000; W. Julian Arnette, president; W. C. Cleveland, vice-president; J. Hudson Williams, secretary and treasurer, and Oscar Hodges, trust officer. Business has begun.

S. C., Jefferson.—The People's Building and Loan Association is reported chartered with \$30,000 capital; officers, J. C. Miller, president; J. K. Shannon, vice-president; C. L. Blakeney, secretary-treasurer.

Tenn., Greenville.—Official: The Citizens' Savings Bank incorporated; capital \$50,000. Incorporators, J. F. Hannah, C. W. Allen, W. C. Waddell, J. E. Biddle and O. B. Lovett. Business is to begin September 1.

Md., Hagerstown.—The Greenbrier Building Association incorporated; capital \$50,000. Incorporators, Harry Hechheimer, J. Frank Fox and Francis A. Buschman. Md., Hagerstown.—The Security Assurance Co. of Hagerstown, capital \$100,000, is reported being organized by Milton Kohler, W. Powers Beard, Dr. D. E. Hoff, Harry E. Bester, R. R. Bender and Lewis D. Syester of Hagerstown, and W. H. Miller of Williamsport.

Mo., Joplin.—The Southwestern Life Insurance Co. is reported to have filed articles of incorporation; capital \$150,000; incorporators, J. A. Cragin, J. F. Dunwoody, G. F. Newburger, A. H. Rogers, D. T. Mason, A. H. Waite, Delmar C. Wise, W. F. Spurigin, W. H. Picher, O. S. Picher, George J. Grayson, J. A. Rogers, J. G. Starr, L. C. Chenoweth, Webb City; John F. Wise, S. C. Ralston and C. C. Cummings.

N. C., Asheville.—The Home Savings Bank is reported being organized with \$25,000 capital. Among those said to be interested are Eugene Collins, Jesse M. Clarke, Frank Weaver, H. S. Holler, S. Sternberg, L. Bloomberg and P. H. Thrash.

N. C., Marion.—The Marion Insurance & Trust Co. is reported chartered; capital \$100,000. Incorporators, J. W. Pless, Sam L. Copeland and others.

N. C., Stokesdale.—The Stokesdale Realty & Insurance Co., capital \$100,000, with privilege of increasing to \$25,000, is reported chartered; incorporators, J. Wright Pegram, T. H. Simpson, A. B. Bray, C. S. Strader and D. P. Lemons.

Tex., Boyce.—The Boyce State Bank is reported organized; capital \$10,000. J. B. Baldridge, president; C. A. Sharp, first vice-president; C. C. Wilson, second vice-president; Charles Davis, Sam Andrews, W. A. Wesson, C. A. Sharp, C. C. Wilson, Fred Newton, J. Baldridge and G. W. Ledwell, directors.

Tex., Britton.—The Britton State Bank is reported chartered; capital \$10,000; incorporators, W. M. J. Spencer, Sam Williams, J. W. Campbell and others.

Tex., Gause.—Reported that a State bank is to be held to vote on about \$10,000 of 5 per cent. school bonds; denomination \$100.

Ala., Gadsden.—Reported voted: \$50,000 of 5 per cent. 30-year water-works bonds; dated June 1, 1911. It is stated bonds will be offered immediately.

Ark., Wilmot.—Official: Bids will be received until June 1 by W. B. de Yampert for \$90,000 of 6 per cent. Ashley county drainage district bonds; denomination \$100; dated June 1, 1911; maturity, \$18,000 in five years and like amount each five years thereafter.

Fla., Brookville.—Reported voted: \$18,000 of street improvement bonds.

Fla., Tampa.—Reported that application is to be made to the Legislature asking authority to issue 5 per cent. bridge bonds, amount not exceeding \$100,000.

Ga., Atlanta.—Press dispatches state that bids will be received until noon June 6 for \$20,000 of water, \$180,000 of school and \$90,000 of sewer bonds. John W. Grant is chairman of the finance committee of Council.

Ga., Blakely.—Reported voted: \$60,000 of school bonds.

Ga., Fort Valley.—Reported voted: \$40,000 of sewerage, school and water-works bonds.

Ga., Jesup.—Reported that an election is to be held in Wayne county to vote on \$100,000 of road bonds.

State Bank incorporated; capital \$25,000; M. J. Whelan, president; T. L. Torrads, vice-president, and L. G. Braden, cashier. Business is to begin about August 1.

Tex., Miles.—The First State Bank of Miles is reported organized with directors thus: W. A. Cox, president; R. A. Grimes, active vice-president; Dr. T. L. Treadway, vice-president, and Will S. Davis, Jr., cashier.

Tex., Pandora.—Reported that a State bank has been organized by J. H. Blake, Jr., of Lockhart and William Blake of San Antonio.

Tex., San Antonio.—Maco Stewart, president of the Stewart Title Guaranty Co., proposes, it is stated, to organize a new title guaranty company.

Tex., Saratoga.—Reported that a State bank capitalized at \$15,000 has been organized with E. M. Saltweather of Kansas.

Tex., Dallas.—The National Insurance Co. is reported organized with \$100,000 capital and \$100,000 surplus; J. E. Cockrell, president; A. Ragland, vice-president; Judge George W. Riddle, treasurer, and Cullen F. Thomas, attorney; Henry Camp Harris, Greenville, secretary.

Va., Charlottesville.—The Charlottesville Savings Bank is reported incorporated; capital \$10,000; H. M. Gleason, president; T. S. Keller, vice-president; E. E. Dinwiddie, secretary.

Va., Charlottesville.—The Charlottesville Savings Bank is reported incorporated; capital \$10,000; H. M. Gleason, president; T. S. Keller, vice-president; E. E. Dinwiddie, secretary.

Va., Lynchburg.—The Lynchburg Industrial Loan Co., capital \$300 to \$500, is reported incorporated by S. W. Patterson, Jr., president; J. E. Walsh, vice-president; W. C. Click, secretary.

W. Va., Anawalt.—The First National Bank of Anawalt is reported being organized by R. L. Johnson, L. E. Terry, A. M. Spangler, E. O'Toole and W. B. Hensel.

W. Va., Keyser.—The Farmers & Merchants' Bank, recently chartered, is reported to have elected Dr. Richard Gerstell, president; J. R. Bane, first vice-president; N. R. Taylor, second vice-president; George Davis, cashier, and Mayor Richard A. Welch, attorney.

W. Va., Wheeling.—The Fidelity Investment and Loan Association is reported chartered; capital \$100,000; incorporators, C. R. Hubbard, W. B. Irvine, George W. Woods, J. F. Paul and J. D. Merriman. Offices will be at 1229 Main St. Mr. Paul is president.

NEW SECURITIES.

Ala., Attalla.—Reported voted: \$16,000 of school bonds.

Ala., Columbiana.—May 15, it is reported, an election is to be held to vote on \$700 of water-works bonds.

Ala., Memphis.—The American Hospital Association is reported to have made application for a charter

Established 1835
The Merchants National Bank

South and Water Sts., BALTIMORE, MD.
 DOUGLAS H. THOMAS, President.
 WM. INGLE, Vice-Pres. and Cashier.
 J. C. WANDS, Asst. Cashier.
 JOHN B. DUNN, Asst. Cashier.
 Capital \$1,500,000
 Surplus and Profits \$800,000
 Deposits, \$12,000,000

Accounts of Banks, Bankers, Corporations and Individuals solicited. We invite correspondence.

**THE FIRST NATIONAL BANK
OF KEY WEST, FLA.**

United States Depository and Disbursing Agent.
 Capital \$100,000
 Surplus and Undivided Profits \$40,000
 A general banking business transacted.
 Special attention given to collections.

MANUFACTURERS and JOBBERS

Frequently find it necessary to have BANKING FACILITIES in addition to those offered by local banks.

FIRST NATIONAL BANK OF RICHMOND, VA.

With assets of nine million dollars, offers just the additional facilities required.
 Jno. B. Purcell, President.
 Jno. M. Miller, Jr., Vice-Pres. & Cashier.

INVESTMENT SECURITIES

Southern Stocks and Bonds
 Municipal and Corporation
 Cotton Mill Stocks a Specialty

WM. S. GLENN, Broker - SPARTANBURG, S. C.

**DELAWARE TRUST CO.
WILMINGTON, DEL.**

EDWARD T. CANBY, President.
 J. ERNEST SMITH, General Counsel and Vice-President.
 HARRY W. DAVIS, Secretary.

Fully Equipped Department for the Organization of Corporations under advice of Counsel, and for the Registration of Corporations as required by the Delaware Law.
 Represents over 500 Domestic and Foreign Corporations.
 The Delaware Corporation Law is Broad, Liberal, Safe and Stable. Granting and annual taxes low.

H. B. Wilcox, President. Jos. R. Foard, V.-Pres.
 Wm. S. Hammond Cash. Sam'l. W. Tschudi, A. Cash.
 R. E. Bolling, A. Cash. Raymond B. Cox, Auditor.

The First National Bank
 17 South St., Baltimore, Md.
 Capital \$1,000,000
 Surplus and Net Profits 560,000
 Resources 9,000,000
 Especially well equipped to handle the business of Southern Manufacturers, Corporations and Individuals. We invite a call or correspondence.
 1863-1911 Years of Success-1911

**The National Exchange Bank
OF BALTIMORE, MD.**
 Hopkins Place, German and Liberty Sts.
 Capital \$1,000,000
 July 15, 1908. Surplus and Profits \$671,631.60
 OFFICERS:
 WALDO NEWCOMER, President.
 SUMMERFIELD BALDWIN, Vice-Pres.
 R. VINTON LANSDALE, Cashier.
 C. G. MORGAN, Asst. Cashier.
 Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

JOHN NUVEEN & CO.
 1st Nat. Bank Bldg., CHICAGO

We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.
 Write us if you have bonds for sale.

FLORIDA TRUST CO.
 JACKSONVILLE, FLA.

Authorized Capital \$600,000
 Mortgages, Real Estate and Securities Bought and Sold
 Acts as Guarantors, Trustees, Executors, etc.

Southern Steam Railroad Securities

DEALT IN

F. J. LISMAN & CO.

Specialists in Steam R. R. Securities
 Members New York Stock Exchange.
 30 Broad Street NEW YORK
 39 Pearl Street, Hartford.
 Land Title & Trust Bldg., Philadelphia.

CAPITAL AND SURPLUS \$3,500,000

THE BALTIMORE TRUST CO.
 BALTIMORE, MD.

Solicits Accounts of Banks, Bankers, Corporations, and Individuals.
 Interest Allowed on Deposits Subject to Check.
 Special Rates Made on Time Deposits.

OFFICERS

DOUGLAS H. GORDON, First V.-Pres.
 G. C. MORRISON, Second V.-Pres.
 SAMUEL C. ROWLAND, Third V.-Pres.
 C. D. FENHAGEN, Secretary-Treasurer

IN today's keen competition, a firm that has its accounts audited regularly by Certified Public Accountants has an advantage over competitors who do not, especially if that firm wants to enlist outside capital. Business men are demanding more and more that firms in which they are interested, and those wanting capital, submit comprehensive, accurate statements.

We have had many years' practice in all branches of accounting, and a consultation will cost you nothing.

INTERSTATE AUDIT CO., 729 15th St. N. W., WASHINGTON, D. C.

CRUSSELLE AUDIT CO.

(INCORP. RATED)

ACCOUNTANTS AUDITORS

SYSTEMATIZERS

1008 Candler Bldg. ATLANTA, GEORGIA

All audits conducted by or under direct supervision of members of the company.

SURETY BONDS

Fidelity and Deposit Co.

OF MARYLAND

Home Office, BALTIMORE, MD.

Assets Over \$5,000,000

Pioneer Surety Co. of the South. Becomes Surety on bonds of every description.

AGENTS IN ALL PRINCIPAL CITIES

HARRY NICODEMUS, EDWIN WARFIELD, Sec'y and Treas. President.

THE COMMERCIAL & FARMERS NATIONAL BANK

located at Baltimore, in the State of Maryland, is closing its affairs. All note holders and other creditors of the association are therefore notified to present the notes and other claims for payment.

SAMUEL H. SHRIVER, Pres. Baltimore, Md., April 11, 1911.

Wm. F. Bockmiller, Pres. John G. Hulett, Sec.

Baltimore Office Supply Co.

106 S. Eutaw St., Baltimore, Md.

MANUFACTURERS OF
 Stamps, Stencils, Seals, Metal Signs, etc.
 Office and Bank Supplies.

Write for prices.

Quincy Show Cases and Fixtures

are found in every first-class establishment. They lead in excellence. Store equipment and furniture our specialty. Ask for Catalog No. 20.

QUINCY SHOW CASE WORKS,
 Quincy, Ill.

CHECK BOOKS

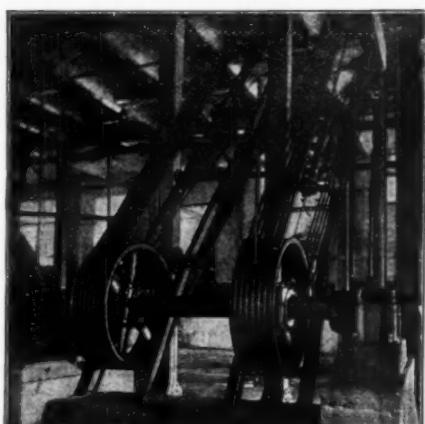
Look at the imprints on checks passing through your office. If you are south of Mason and Dixon's Line and East of the Mississippi River, you will find more of our imprints than of any other. Of course there is a good reason.

When needing check books consult.

Young & Selden Co.

BANK STATIONERS BALTIMORE, MD.

Lithographing, Printing, Envelopes
 Blank Book Makers, Book Binding
 Letter Heads, Office Supplies
 Steel Die Work



1891-1911

In 20 successful years the Burroughs has developed from a simple adding and listing machine to 78 distinct styles of Burroughs Book-keeping Machines.

There are 110,000 users today who have bought the Burroughs for one all-inclusive reason, viz: it makes each clerk produce more work and better work in eight hours than he could produce in twelve.

Machines Cost \$175.00 to \$850.00. Payable in easy installments if desired.

Burroughs
 Adding Machine Co.
 80 Burroughs Block, Detroit, Michigan
 1280-A

**FOR VERTICAL AND ANGLE DRIVES
THE "AMERICAN" SYSTEM OF
MANILA ROPE TRANSMISSION**

is unexcelled by any other method of power distribution

PROPERLY DESIGNED,
 these drives are
INEXPENSIVE to install
ECONOMICAL to maintain
EFFICIENT in operation
NOISELESS
 and
POSITIVE

These properties of a rope drive depend to a great extent upon the rope.

"American"
Transmission Rope
 has demonstrated its superiority in this field.

Made of best quality selected hemp, stretched in process of manufacture, laid up in our special waterproofing and lubricating compound, and requires no external dressing.

Write for our treatise on rope driving, the BLUE BOOK OF ROPE TRANSMISSION.

American Manufacturing Co.

Largest Workers of Fibre in the World

Manufacturers of Manila, Sisal, and Jute Cordage of all kinds

63-65 Wall Street

New York City

TRANSMISSION ROPE

PAULSON, LINKROUM & CO.

COMMISSION MERCHANTS

COTTON YARNS

NEW YORK
 87-89 Leonard Street

PHILADELPHIA
 120 Chestnut Street

CHICAGO
 156 Market Street

MANUFACTURERS RECORD.

Ga., Rome.—The Hillyer Trust Co. of Atlanta, Ga., is reported to have been awarded at \$204,025 the \$200,000 of 4 per cent. street, sewer, water-works and school bonds.

Ga., Swainsboro.—Official: The \$40,000 of water and light bonds voted April 17 are 5 per cents; denomination \$1000. Address The Mayor.

Ky., Covington.—The First National Bank of Covington, according to press dispatches, has purchased \$100,000 of 4 per cent. 20-40-year park bonds.

La., Coushatta.—Reported voted: \$25,000 of school bonds.

Ky., Dawson Springs.—Reported that bids will be received until 6 P. M. May 27 by J. B. Rice, clerk, for \$10,000 of 5 per cent. 5-20-year sewer bonds.

Ky., La Grange.—Official: Bids were received until May 1, inclusive, for \$12,500 of 5 per cent. 1-20-year bonds of La Grange Graded School District; denomination \$100. G. S. Morris is president and R. O. Duncan secretary Board of School Trustees.

Ky., Madisonville.—An election is soon to be held, it is reported, to vote on \$85,000 of water-works bonds.

La., Mansfield.—Reported voted: \$100,000 of De Soto county courthouse bonds.

La., Ruston.—Official: The Security Trust Co., Detroit, Mich., purchased March 31 at par and accrued interest, with consideration of \$1600 for printing bonds, all technical and legal matters, the \$65,000 of 5 per cent. 33-year public school building bonds; denomination \$500; dated April 1, 1911. L. J. Bell is president School Board, Choudrant, La.

Md., Baltimore.—Bids will be received until noon May 15 for the following city stock: \$100,000 of Jones Falls Improvement, \$500,000 of schoolhouse, \$200,000 of dock improvement and \$200,000 of conduit; interest 4 per cent.; John M. Little is president Board of Commissioners of Finance and Isaac L. Newman clerk.

Md., Baltimore.—Voted: \$10,000,000 of sewerage loan, \$5,000,000 of paving loan and \$2,500,000 of annex-improvement loan.

Md., Rockville.—Reported that a special election is to be held in Colesville district to vote on \$7000 of bonds for purchase of the Washington, Coleville and Ashton turnpike.

Md., Enon.—Official: No sale was made April 15 of the \$40,000 of 4 per cent. 1-40-year sewer bonds; denomination \$1000; dated January 3, 1911. Martin M. Higgins is Mayor.

Md., La Plata.—Reported voted: \$15,000 of water bonds.

Md., Westernport.—Bids will be received by John P. Miller, chairman Finance Committee, until noon May 23 for \$5000 of 5 per cent. 5-30-year general-improvement bonds. O. H. Bruce is clerk.

Miss., Newton.—Reported voted: \$25,000 of school bonds.

Miss., Hattiesburg.—Reported voted: \$40,000 of school bonds.

Miss., Tupelo.—Reported that \$50,000 of 5 per cent. bonds have been sold at par to the People's Bank & Trust Co. of Tupelo.

Miss., Tupelo.—Reported voted: \$50,000 of electric-light, city hall and street bonds, which, it is stated, are to be placed on the market immediately.

Mo., Brookfield.—Reported voted: \$16,000 of road bonds.

Mo., Cole Camp.—Reported voted: \$10,000 of water-works bonds.

Mo., Excelsior Springs.—The First National Bank of Excelsior Springs is reported to have been awarded \$30,000 of 5 per cent. 20-year school bonds at 103.

Mo., New Madrid.—Reported that the New First National Bank of Columbus has purchased at 102.13 and interest \$92,000 of 6 per cent. bonds of drainage district No. 26.

Mo., Sedalia.—Reported that bids were received until 7.30 P. M. May 1 by C. E. Baker, City Clerk, for \$60,000 of 4½ per cent. 5-20-year Liberty Park bonds.

N. C., Asheville.—Press dispatches state that an election will be held to vote on \$50,000 of school bonds.

N. C., Ayden.—Official: Bids will be received until noon June 1 for \$12,000 of 5 per cent. 30-year school building and equipping bonds; denomination \$500; dated July 1, 1911; maturity July 1, 1941. Address J. F. Barwick, Mayor.

N. C., Fayetteville.—Bids will be received until noon May 24, it is reported, by W. N. Tillinghast, secretary of graded school district, for \$50,000 of 5 per cent. 30-year school bonds.

N. C., Laurinburg.—Press dispatches state that all bids received April 25 for \$37,500 of

5 per cent. 20-year municipal bonds were rejected and that the Commissioners are now offering them at private sale.

N. C., Wilmington.—Official: May 31 an election is to be held to vote on \$50,000 of 4½ per cent. 25-year New Hanover county road and bridge-building bonds. Denomination \$100 to \$1000. Dated July 1, 1911. D. McEachern is chairman Board of Commissioners of New Hanover county.

N. C., Roxboro.—F. M. Stafford & Co. of Chattanooga, Tenn., are reported to have purchased at par \$25,000 of 5 per cent. light, water and sewerage bonds.

N. C., Wadesboro.—May 2 Anson county voted on \$300,000 of road-improvement bonds.

Okl., Ardmore.—Reported that \$47,100 of 5 per cent. 20-year refunding bonds have been purchased by the United States Bond & Mortgage Co. of Dallas. James A. Cottner is Mayor.

Okl., Blackwell.—Bids will be received until 4 P. M. May 15 for \$75,000 of 5 per cent. 15-25 year school bonds. B. W. Jones is clerk Board of Education.

Okl., Fort Townson.—Reported that \$10,000 of 6 per cent. 25-year water-works bonds have been purchased by Geo. I. Gilbert of Oklahoma City.

Okl., Muskogee.—Official: Bond issue will soon be called to vote on \$500,000 of Muskogee county office-building bonds.

Okl., Skiatook.—Reported voted: Water-works and electric-light bonds.

Okl., Weleetka.—Reported voted: \$45,000 of water-works and light plant construction bonds.

S. C., Chesnee.—May 1, it is reported, an election was held to vote on bonds of Chesnee School District 95, Spartanburg county.

S. C., Clinton.—Official: Bids will be received until noon May 17 for \$45,000 of sewerage and \$20,000 of water-works extension 5 per cent. 30-year bonds; denomination \$1000. W. M. McMillan is Mayor.

S. C., Dillon.—Reported that an election will soon be held to vote on \$80,000 of water and sewer bonds.

S. C., Dillon.—Reported voted: \$23,000 of school bonds.

S. C., Edgefield.—May 18, it is reported, an election is to be held to vote on electric-light-plant bonds, amount not to exceed \$15,000.

S. C., Marion.—Official: Bids will be received until noon May 25 by J. W. Johnson, attorney Board of School Trustees, for \$20,000 of High School District No. 1 and \$30,000 of School District No. 36 5 per cent. 40-year bonds.

S. C., Yorkville.—Reported that \$74,000 of refunding bonds of Catawba and Ebenezer townships of York county have been awarded as follows: People's National Bank of Rock Hill, \$28,000; National Union Bank of Rock Hill, \$14,400; B. N. Moore, Yorkville, \$1000; S. M. McNeel, treasurer, Yorkville, \$1000; S. M. McNeel, Yorkville, \$5000; Loan and Savings Bank of Yorkville, \$25,000; First Presbyterian Church, Yorkville, \$1000, Catawba.

S. C., Saluda.—Reported voted: \$10,000 of railroad-aid bonds.

S. C., St. Matthews.—Official: Bids will be received until noon June 21 for \$20,000 of 6 per cent. 20-40-year bonds for public buildings for Calhoun county; denominations, \$18,000, \$500 each, and 2000 of \$100 each; dated July 1, 1911. Address J. S. Wannamaker, Mayor. T. L. Buyck is Town Clerk.

Tenn., Benton.—Bids will be received until noon May 20, it is reported, by J. H. Williamson, Judge of Polk county, for \$50,000 of highway and bridge and \$25,000 of high school building 5 per cent. bonds.

Tenn., Beeville.—Official: W. C. Whitney purchased January 9 at par and accrued interest \$75,000 of 4½ per cent. 10-40-year Bee county courthouse bonds; denomination \$500.

Tenn., Bonham.—May 15, it is reported, an election is to be held to vote on \$100,000 of street paving and \$30,000 of water-works bonds.

Tenn., Brenham.—Official: \$57,000 of 5 per cent. 20-40-year district bonds have been sold to E. A. Toeelman of Galveston; denomination \$500.

Tenn., Bellville.—Reported voted: \$50,000 of bonds of First Justice precinct of Austin county.

Tenn., Caldwell.—Press dispatches state that drainage district No. 2 has been organized and that an election will be held to vote on \$425 of bonds.

Tenn., Clarksville.—Reported voted: Water-works bonds.

Tenn., Bristol.—Official: A bill authorizing an issue of \$40,000 of water-works improvement bonds is in the hands of the General Assembly at Nashville.

Tenn., Chattanooga.—The Security Savings Bank & Trust Co. of Toledo, O., is reported to have purchased at \$28.5 premium the \$2802.76 of 6 per cent. paving districts bonds. Address T. C. Thompson, Mayor.

Tenn., Chattanooga.—Official: Bids will be received until May 20 for \$125,000 of school and \$100,000 of Rossville boulevard 4½ per cent. 30-year bonds of Hamilton county. Address Joe V. Williams, County Judge, or George M. Clark, chairman Finance Commission.

Tenn., Dyer.—Reported voted: \$25,000 of water-works bonds.

Tenn., Germantown.—An ordinance has been prepared providing for the issue of \$3000 of 6 per cent. 20-year public-improvement bonds. Address The Mayor.

Tenn., Lexington.—Reported that \$50,000 of water-works and electric-light plant bonds are to be issued. C. G. Gathings is Mayor.

Tenn., Newport.—Reported voted: \$50,000 of water-works bonds.

Tenn., Park City, P. O. Knoxville.—Official: Bids will be opened May 20 for \$25,000 of 5 per cent. 30-year refunding and street-improvement bonds; denomination \$1000; dated May 1, 1911; maturity May 1, 1941. Address T. S. Dooley, Mayor, care Union Bank, Knoxville, Tenn.

Tenn., Springfield.—Official: Voted: \$15,000 of 5 per cent. 20-year school-improvement bonds; denomination \$500. Bids for same were opened April 20; purchaser not yet determined.

Tenn., Tullahoma.—An official letter says that \$25,000 of sewerage bonds have been authorized by the Legislature. If it is decided by city to hold bond election, same will be called some time within two years. Address W. A. Marshall.

Tenn., Austin.—The Attorney-General has approved the following securities: \$15,000 of 5 per cent. 8-40 year bonds of Lynn county common school district No. 2; \$1000 of 5 per cent. 20-year bonds of Houston county common school district No. 3; \$1000 of 5 per cent. 5-20 year bonds of Henderson county common school district No. 6; \$6000 of 5 per cent. 40-year bonds of Cottle county common school district No. 1; \$100,000 of Galveston water-works bonds; \$10,000 of 5 per cent. 20-40 year Myra independent school district schoolhouse bonds; \$500 of 5 per cent. 5-20 year Jack county common school district No. 23 schoolhouse bonds; \$21,000 of 5 per cent. 10-40 year Lufkin water-works bonds; \$57,000 of 5 per cent. Washington county Improvement district No. 1 drainage bonds; \$450 of 5 per cent. 5-20 year Henderson county common school district No. 9 schoolhouse bonds; \$10,000 of 5 per cent. 20-year Colorado independent school district schoolhouse bonds.

Tenn., Beeville.—Official: W. C. Whitney purchased January 9 at par and accrued interest \$75,000 of 4½ per cent. 10-40-year Bee county courthouse bonds; denomination \$500. The Commissioners' Court of Lamar county has been authorized to sell them, and the sale will probably be in the early months of next fall. It is the present intention to issue not over \$100,000 of these bonds per year until the issue is expended. W. F. Gill is County Auditor, and T. J. Record president of Lamar County Good Roads Association.

Tenn., Rice.—Official: Voted March 4: \$16,000 of 5 per cent. 20-40 year school bonds of district No. 2, Navarro county; denomination \$1000. Address W. T. Wilson, J. B. Fartson and T. W. Neal, Secretary.

Tenn., San Jose.—The Bank of San Jose, J. O. Parrish, cashier, is offering for sale \$ per cent. first mortgage bonds on the San Antonio & San Jose Interurban Railway; denomination \$100.

Tenn., Shafter Lake.—Reported voted: School district bonds.

Tenn., Spur.—Reported voted: \$18,000 of 5 per cent. 20-40 year school district bonds.

Tenn., Tyler.—Reported that an election is to be held in Smith county to vote on \$10,000 of road-improvement bonds.

Tenn., Weatherford.—Reported that about \$2000 of school bonds will be issued.

Tenn., Wallis.—Reported voted: \$25,000 of road bonds.

Tenn., Winfield.—Official: L. H. Armstrong may be addressed regarding the sale of \$8000 of 5 per cent. 40-year school-building bonds; denomination \$200; dated February 20, 1911.

Va., Blacksburg.—Official: May 16 an election is to be held to vote on \$12,000 of water

Tex., Emma.—April 29, it is reported, an election was held to vote on \$15,000 of schoolhouse bonds.

Tenn., Farmersville.—Official: Voted \$20,000 40-year school and \$10,000 of 30-year street-improvement bonds; interest 5 per cent.; denomination \$500; bonds to be dated about May 1 and June 1, 1911. Address J. B. Hudleston, Mayor.

Tenn., Forrester.—Official: State has purchased \$12,000 of school bonds. N. G. Gardner is secretary School Board.

Tenn., Goldwaite.—Reported defeated: \$50,000 of road-building bonds of Precinct No. 1, Mills county.

Tenn., Grapeland.—May 27, it is reported, an election is to be held to vote on \$10,000 of school bonds.

Tenn., Brookshire.—Official: James Shapley & Son, Houston, Tex., has purchased \$8000 of 5 per cent. 20-40 year school bonds at \$50 premium; dated January 5, 1911; denomination \$500. V. M. Donigan is secretary of Brookshire Independent School District.

Tenn., Gainesville.—A letter to the Manufacturers Record says that the sale of \$100,000 of Cooke county (Texas) road district No. 1 4½ per cent. bonds to Thomas J. Bolger Company, Chicago, was not consummated, their attorneys declining to approve the legality of the issue.

Tenn., Groveton.—An official letter confirms report that at the May term of Trinity County Court an election may be ordered to vote on a public road bond issue for Groveton precinct only. G. W. Locke is County Clerk.

Tenn., Houston.—According to press dispatches, bids will soon be asked for \$1,250,000 of 4½ per cent. 40-year bonds for deepening Buffalo Bayou. Charles Dillingham is chairman Navigation Commissioners.

Tenn., Kurten.—Reported that the State Board of Education has purchased \$2000 of school improvement bonds.

Tenn., Paris.—Official: J. B. Oldham, Dallas, Tex., purchased April 17 the \$50,000 of 5 per cent. 10-50-year street and school bonds at par and accrued interest of \$250; denomination \$1000; dated May 10, 1911. Address City Council.

Tenn., Paris.—Official: Voted April 22: \$300,000 of Precinct No. 1 Lamar county road bonds. The Commissioners' Court of Lamar county has been authorized to sell them, and the sale will probably be in the early months of next fall. It is the present intention to issue not over \$100,000 of these bonds per year until the issue is expended. W. F. Gill is County Auditor, and T. J. Record president of Lamar County Good Roads Association.

Tenn., Rice.—Official: Voted March 4: \$16,000 of 5 per cent. 20-40 year school bonds of district No. 2, Navarro county; denomination \$1000. Address W. T. Wilson, J. B. Fartson and T. W. Neal, Secretary.

Tenn., San Jose.—The Bank of San Jose, J. O. Parrish, cashier, is offering for sale \$ per cent. first mortgage bonds on the San Antonio & San Jose Interurban Railway; denomination \$100.

Tenn., Shafter Lake.—Reported voted: School district bonds.

Tenn., Spur.—Reported voted: \$18,000 of 5 per cent. 20-40 year school district bonds.

Tenn., Tyler.—Reported that an election is to be held in Smith county to vote on \$10,000 of road-improvement bonds.

Tenn., Weatherford.—Reported that about \$2000 of school bonds will be issued.

Tenn., Wallis.—Reported voted: \$25,000 of road bonds.

Tenn., Winfield.—Official: L. H. Armstrong may be addressed regarding the sale of \$8000 of 5 per cent. 40-year school-building bonds; denomination \$200; dated February 20, 1911.

Va., Blacksburg.—Official: May 16 an election is to be held to vote on \$12,000 of water

LEBANON VALLEY IRON & STEEL CO.

General Office and Works, LEBANON, PENNSYLVANIA, U. S. A.

New York Office, 50 Church St.

Chicago Office, 1509 Railway Exchange Bldg.

Railroad Spikes and Track Bolts Machine Bolts and Hot Pressed Nuts

We also manufacture Rivets, Machine and Carriage Bolts, Merchant Bar Iron, Bar Steel, Muck and Scrap Bars



and sewer 6 per cent. 15-30-year bonds; denomination \$100. F. W. Eheart is Mayor and Geo. W. Wilson Clerk.

Va., Boydton.—Reported that on June 17 an election is to be held to vote on \$50,000 of Lacsrosse and South Hill magisterial districts. H. F. Hutchison is County Clerk.

Va., Christiansburg.—Official: Bids will be received until 8:30 P. M. May 20 for \$40,000 of 5 per cent. 15-30-year water-works bonds. Address E. S. Hagan, Mayor.

Va., Graham.—Reported voted: \$50,000 of 5 per cent. 30-year school-building, water-works and street-improvement bonds.

Va., Newport News.—An election is to be held June 24, it is reported, to vote on \$150,000 of electric-light plant bonds.

Va., Middlebourne.—Reported voted: \$125,000 of 5 per cent. 10-34-year Tyler county railroad-aid bonds.

Va., Wytheville.—Reported voted: School bonds.

At Marion, S. C., bids will be received until noon May 25 for \$20,000 of bonds for high-school district No. 1 and \$30,000 of school district No. 36, 5 per cent. 40-year bonds. *Further particulars will be found in the advertising columns.*

At Clinton, S. C., bids will be received until noon May 17 for \$45,000 of sewer and \$20,000 of water-works 5 per cent. 30-year bonds. *Further particulars will be found in the advertising columns.*

At Christiansburg, Va., bids will be received until 8:30 P. M. May 20 for \$40,000 of 5 per cent. 15-30-year water-works bonds. *Further particulars will be found in the advertising columns.*

At Baltimore, Md., bids will be received until noon May 15 for the following 4 per cent. city stock: Jones Falls Improvement, \$100,000; schools, \$500,000; dock improvement, \$200,000; conduit loan, \$200,000. *Further particulars will be found in the advertising columns.*

At St. Matthews, S. C., bids will be received until noon June 21 for \$20,000 of 6 per cent. 20-40-year Calhoun county public-building bonds. *Further particulars will be found in the advertising columns.*

At San Jose, Tex., 8 per cent. first mortgage bonds of the San Antonio & San Jose Interurban Railway are being offered. *Further particulars will be found in the advertising columns.*

FINANCIAL NOTES.

The First State Bank of Paducah, Tex., is reported to have increased its capital from \$30,000 to \$50,000.

The Fulton National Bank, Atlanta, Ga., it is reported, will increase its capital from \$500,000 to \$500,000.

The Newnan Banking Co., Newnan, Ga., is reported to have voted to increase its capital from \$55,000 to \$125,000.

The Corey Investment Co., Birmingham, Ala., is reported to have increased its capital from \$3000 to \$50,000. William M. Walker is president.

The Citizens' Bank of Blackshear, at Blackshear, Ga., according to press dispatches, has increased its capital from \$25,000 to \$50,000.

The Union Trust Co. and the Exchange National Bank, both of Tulsa, Okla., are reported to have consolidated business to be conducted by the latter institution.

The Citizens' Bank of Augusta, Ga., proposes, it is stated, to increase its capital from \$50,000 to \$75,000. W. S. Morris is president.

The Atlantic Permanent Building and Loan Association of Berkley, Va., according to press dispatches, has changed its name to the Atlantic Permanent Building and Loan Association, Inc., and increased its capital from \$1,500,000 to \$2,500,000. J. A. Norfleet is president.

The Southern Surety Co., with headquarters in Muskogee, Okla., will, according to press dispatches, remove its main offices to St. Louis. The company is also said to have increased its capital from \$400,000 to \$1,000,000. C. S. Cobb is president. Another dispatch says the Muskogee company will take over the Middle Casualty Co. of St. Louis.

A condensed statement of 243 State banks doing business in Virginia March 7, 1911, shows loans and discounts, \$48,362,911; due from banks, bankers and trust companies, \$8,298,470; capital stock, \$9,856,693; surplus fund, \$4,655,640; undivided profits, less interest, taxes and expenses, \$1,941,779; total deposits, \$48,345,560; due to banks, bankers and trust companies, \$1,013,351; total resources, \$67,470,276.

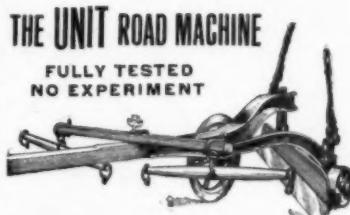
THE BOARD OF DIRECTORS OF THE AMERICAN Cotton Oil Company on May 2, 1911, declared a semi-annual Dividend of THREE PER CENT. upon the Preferred Stock, and a semi-annual Dividend of TWO AND ONE-HALF PER CENT. upon the Common Stock of the Company, both payable June 1, 1911, at the Banking House of Winslow, Lanier & Co., 59 Cedar St., New York City.

The Stock Transfer Books of the Company will be closed on May 16, 1911, at 3 P. M., and will remain closed until June 2, 1911, at 10 A. M.

JUSTUS E. RALPH, Secretary.

THE UNIT ROAD MACHINE

FULLY TESTED
NO EXPERIMENT



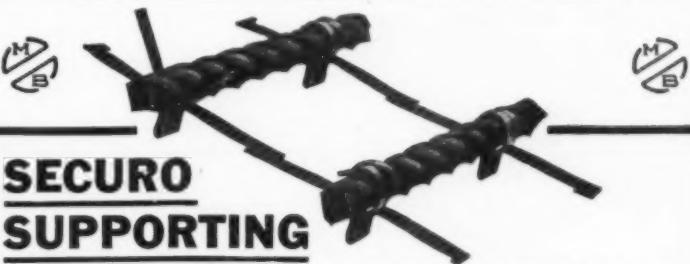
Only One Man and One Team required to operate it.

The Price is Less than One-Fifth, the Expense of Operation but a Fraction of that of the large graders.

Used Where the Heavy Machines are Impracticable, and does as efficient work.

Write for booklet and terms on which we send the UNIT on trial.

THE CALL-WATT CO.
Box 602 RICHMOND, VA.



SECURO SUPPORTING SPACER

This modern device supports the reinforcing bars the correct distances from the bottom of the slab; it spaces the bars evenly and accurately the specified distances from center to center; the prongs when bent over the bar lock it securely in a vice-like grip so that it can never slip or become dislocated.

The specifying of Securo Supporting Spacers is the architect's and engineer's only means of knowing that the reinforcing bars are in the exact places called for by the design. The owner is interested because they insure the structural strength and safety contemplated in the original plans. Contractors are vitally concerned as the bars can be located and locked without the usual trouble and at less than half the cost of locating, blocking up and wiring by the usual method.

Furnished in any length and any spacing center to center of bars.

Write for detailed information regarding SECURO SUPPORTING SPACERS

WM. B. HOUGH COMPANY
CHICAGO U. S. A.

RUSE & THOMPSON

Successors to John C. Scherer, Jr., Co.

9 and 11 N. Gay St., Baltimore, Md.

Designers and Manufacturers of
Bank, Store and Office Fixtures and Furniture

Write for estimates before placing order.



Before the Fire or After?

WHEN are you going to find out whether the fire insurance you have paid for is really good or not—before or after the fire which makes it due and payable? You cannot change it after the fire. It will be too late then, but before the fire you can readily, at no extra cost, select an insurance company whose record and strength guarantee the liberal fulfillment of its obligations.

Upon foundations of commercial honor the Hartford Fire Insurance Company has built up the largest fire insurance business in the United States. It has paid more than \$135,000,000 to its policy-holders. Its popularity is the reward of merit, and the result of over a century of honorable dealings with its patrons.

When next you insure, tell the agent the Company you want.

INSIST ON THE HARTFORD

Agents Everywhere



Purchase Street, Boston, Mass., Granite Block Pavement filled with Barrett's Paving Pitch, in 1904

How Pitch Filler Saves Money for Cities

Pitch filler should be used in brick, wood block or granite block pavements, because it is more economical than other fillers.

As contrasted with cement filler, pitch saves money by eliminating repairs. The cement filled pavement frequently cracks on account of expansion or contraction, no matter how carefully expansion joints are arranged. It cracks also because if the foundation settles, the pavement does not follow the depression, but arches over it, and will not support the heavier loads.

Pitch Filler has none of these faults because it is plastic.

As contrasted with asphalt filler, paving pitch saves money by its greater adhesiveness and plasticity. When the bricks contract in cold weather asphalt is not sufficiently plastic and adhesive to adjust itself to the widened joints, and leaves cracks between the brick and the

filler, permitting water and frost to reach the foundation. Paving Pitch on the other hand has great tenacity and is plastic. When the joints widen, the pitch simply settles a little lower in the joints, but keeps the waterproof seal unbroken.

No expansion joints are necessary with paving pitch. "Every joint is an expansion joint." Each brick rests on a proper foundation and cracks are impossible. Despite its plasticity, paving pitch is permanent and will be found still doing its work satisfactorily whenever an opening is made. It is the best possible protection against water and frost, making a continuous and unbroken seal that protects the foundation perfectly.

Booklet exhibiting some of the wonderful records made by pitch filled brick pavements and containing also a model specification will be sent free on request.

BARRETT MANUFACTURING COMPANY

New York
Pittsburg

Chicago
Cincinnati

Philadelphia
Kansas City

Boston

Minneapolis
New Orleans

St. Louis
Seattle

Cleveland
London, England

